PHOTO-ERA

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An American Shrine

PHILIP B. WALLACE

PHILADELPHIA is the proud possessor of the national shrine, Independence Hall. Although we celebrate the Fourth of July as a national celebration day for the signing of the Declaration of Independence, it was not until nearly a month later that the Declaration was signed. The Declaration of Independence was adopted on the Fourth of July, 1776, proclaimed to the people on the eighth of July, and, on August the second it was placed on the President's table for the signature of the members of the Continental Congress. And of the historic buildings of any note in America there is none that surpasses the story of this historic old building—the Old State House or Independence Hall. In the stirring times of to-day, it has truly been a Mecca of all peoples who strive for the liberty believed to be their due.

It was forty-seven years after the city had been founded by William Penn before the proprietary government attempted to supply the need of an administrative building. The general assembly of the Province had meanwhile occupied various places for its sessions, viz., rooms in private houses, school-rooms and even the great Quaker Meeting-House. Philadelphia was the richest and largest city of the Colonies, and it was only natural that a fine administrative building should be erected. A lot on Chestnut Street was purchased in 1730, and Andrew Hamilton, speaker of the assembly, was the architect of the building.

It has been erroneously stated that Dr. John Kearsley was the architect of the State House; but Dr. Kearsley, who had designed Christ Church, and being rather vain of this notable accomplishment, gave Hamilton all the trouble he could by his objection to the site of the State House and to assembly itself. Here we have the lawyer who designed the State House and a physician who conceived Christ Church 1729–31. And this old church, a handsome building, was one in which Washington and many other notables of the day worshiped. The first of the group of the buildings was begun in 1732 and the wings were not completed until 1744. Two years after the completion of the main building it was decreed by the Pennsylvania assembly:—"It is the true intent and meaning of these Presents that no part of the said ground lying to the southward of the State House, as it is now built, be connected into or made use of for erecting any sort of Building thereupon, but that the said ground shall be enclosed and remain a public open Green and Walks forever." But eighty years later, some effort was made to cut up the green plot and convert it into building-lots; but it was proved that the State House Square had been "irrevocably devoted to the purpose of an open and public walk." So the effort to do so was frustrated and the grounds are to-day, and must ever remain, open for the benefit of the people.

The first bell was ordered from England in 1751, and bore the inscription, "Proclaim Liberty throughout all the land to all the inhabitants thereof," Leviticus xxv. 10. When the bell was hung it was cracked by a stroke of the clapper. It was recast in Philadelphia, but not being satisfactory, it was cast the third time when it was successful. The State House is beautiful. It was beautiful when it was built and it will remain beautiful as long as it stands. The façade of the northern or Chestnut Street side is dignified and simple, whereas the southern front is broken by a tower and a rather high steeple. Above the southern entrance is the beautiful triple Palladian window. As one enters through this doorway, one sees the famous Liberty Bell which stands on a low platform. The corridor is paved with bricks, and it gives one a sense of glorious white and mahogany, and also yields beautiful vistas. And, standing in the corridor, one can gaze through the arch to one of the most mag-

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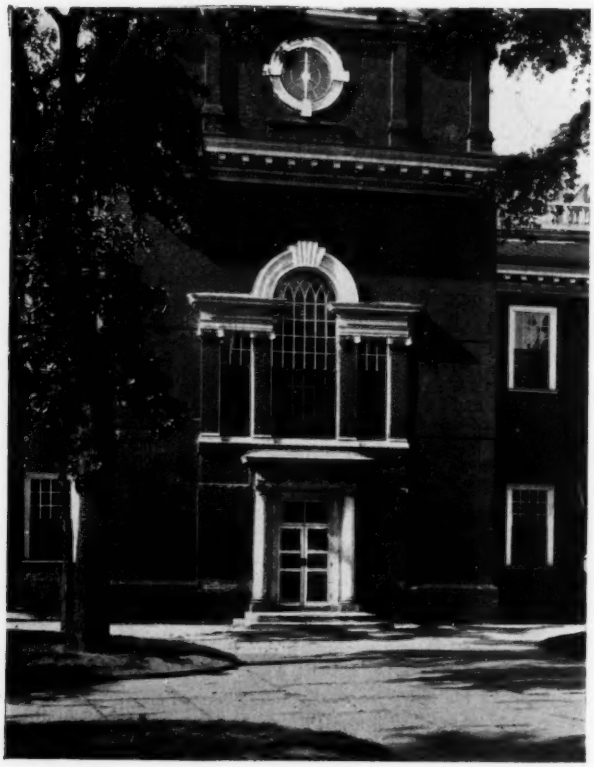

SOUTH ENTRANCE PHILIP B. WALLACE

nificent stairways in America. It is a pleasing building to photograph, and one is at a loss where to begin. The lighting gives ample play to delicate highlight and deep shadow.

The interior lighting is very ample, as many windows permit time-exposures of short duration. Viewed from the south, this front of the building does not present any serious difficulties; but the northern façade is much more difficult to photograph, as the front faces north, the street-space is limited and there is a great amount of street-traffic to contend with. Here one would be compelled to use a lens of very short focus and a camera of the larger type. If details will answer, then the smaller camera will do. The Palladian window and the southern doorway present a charming bit of composition framed by two old trees. Even with the smallest camera interesting bits can be obtained, and the large space of the open square will permit ample scope to photograph in the entire building. From the southwest the view portrays the old building surrounded by a low brick-wall, and glimpses of the tall tower and steeple grouped with the old trees.

If one loves the memory of our famous sailors, there is a vigorous statue of Commodore John Barry, a naval officer of the Revolutionary War, in the center of the square. It is a heroic life-size figure with one arm outstretched, the statue being mounted on a granite base. This must be photographed some distance away to obtain a true perspective of the figure, otherwise distortion will result. The 3A film-camera will be an ideal camera for the visitor and the tourist, as with this he can obtain virtually all he desires. The building is rectangular, and one can compose the view to suit his purpose best. Of course, everyone wishes to obtain a photograph of the

THE LIBERTY BELL PHILIP B. WALLACE

famous Liberty Bell, and it is not hard to photograph, as there is ample space in the corridor and the lighting is very good.

Just a few steps, and you are in the Declaration-Chamber, a large room, nearly square, serenely beautiful, dignified, with beautiful paneling, pilasters and a charming cornice. As one enters, he can visualize that body of earnest men as they debated the birth of a new nation. There were the venerable Franklin, Jefferson of the red hair, Hancock and Adams of Massachusetts, and the other noted delegates. "Surely," as Franklin remarked later, at the signing of the Constitution, as he gazed at the President's chair and at the emblem on the back of it, "now I know it is a rising sun and not a setting sun." The principal feature in this room, of course, is the chair and desk on which the Declaration was signed.

On the other side of the hallway is the room of the Supreme Court. It is beautifully defined by three handsome arches, the view through which is very effective. On the second floor, the Banquet Hall runs the entire length of the building. It was restored some years ago and, although it is interesting, it does not make a very effective photograph. On coming to the exterior view made from the southwest, this was made with a 5 x 7 Goerz Syntor lens, a 5 x 7 view-camera and the view was made within the limits of the square. The lens was considerably raised, owing to the height of the steeple. A Goerz 10-time ray-screen was used in connection with a Polychrome plate and very excellent cloud results were obtained. Developed with Metol-Hydro, the Polychrome plate gives very excellent results with a screen; and I have found other

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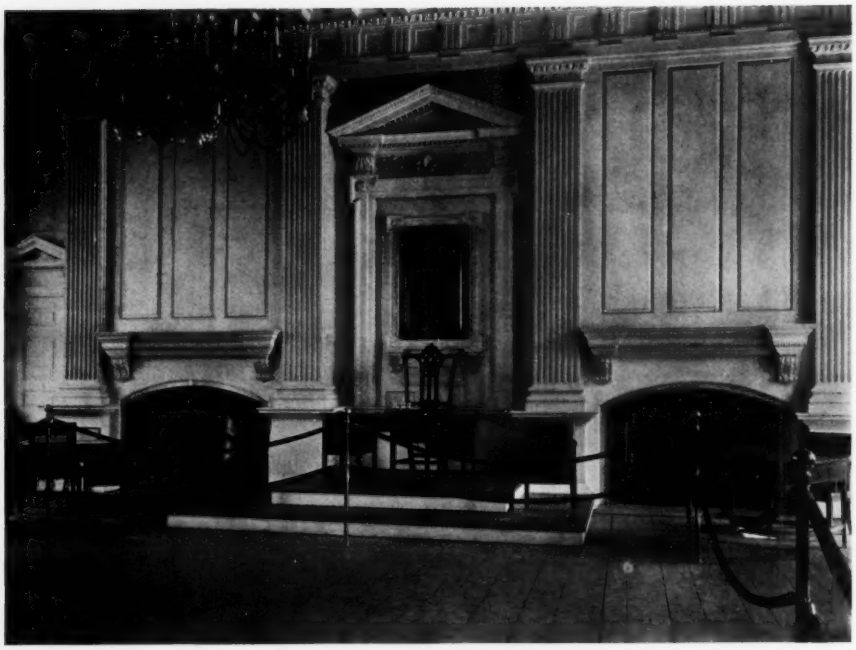

DECLARATION-CHAMBER PHILIP B. WALLACE

ortho plates that have a tendency towards hardness. It was a rather cold day during the past winter when a view of the direct southern front was made. An Eastman Portrait-Film was used in connection with a lens of medium focal length and a view-camera. The exposure was a slow snap of 1/5 of a second and the results were very good.

But to return to the interior again. The vista of the beautiful stairway is not very difficult for the camerist, as the lighting on the stairway itself is very bright, although the corridor is not so well illuminated; but the white work reflects a certain amount of light. Here a lens of medium focal length was used on a 6½ x 8½ plate. The President's chair, or as it is sometimes called, the Speaker's chair, was photographed while some repairs were being made to the hall. It is a large, heavy chair of the Chippendale type and stands on the small dais in the Declaration-Chamber.

A Seed panchromatic plate was used and no screen, as there is no grain to show, the chair being dark in color, and the plate answered very well. The silver ink-stand on the desk was used in the signing and was made by a celebrated Philadelphia silversmith, Philip Syng. When photographing so many different subjects it is important to know your outfit! That is the one great secret of getting results. One must be guided by the type of camera and lens he likes best.

The soft-focus lens answers very well for softly defined details; but owing to its rather long-barrel construction is not adapted to interior views that require a rather wide-angle instrument. It might be like the story of a certain well-known type of automobile that is now to be constructed of German helmets, so that it will run faster; and, possibly, one might need a lens to include more after he has gone over the desired view to be photographed, than is covered by the lens he has with him. The best way is to study carefully the point of view, to feel that nothing is missed and, at the same time, not to include too much. The usual trouble

A VISTA THROUGH
THE ARCHED CORRIDOR
PHILIP B. WALLACE

THE SPEAKER'S CHAIR PHILIP B. WALLACE

with so many views is that they are too much of the map-like type. It is rather embarrassing to show a print with too little foreground, or too much of another part, or a choice point sadly missing. Too much is produced that is only fit for the waste-pile. Of course, it is an advantage for the manufacturer, the dealer and, perhaps, the photo-finisher, but you need the money as well as they do. One would hesitate to wear misfit clothing. Then why not exercise the judgment displayed to get a proper fit and then apply it as well to getting the proper result? There is no difficulty to get the proper chemicals, to-day, and the other essentials for good work. If the smaller kodak or camera is used, very fine enlargements with amazing details can be made and look quite as well as the larger contact-prints. And the camera with the single lens will produce excellent results if it is used with due care. If one prefers the camera with the ground-glass, so much the better for him, as he can compose the view much better; but with a film-camera it is sometimes quite difficult to know just what is included and what is left out.

It is an inconvenience to carry a tripod around; but most of the time when a time-exposure is required, there is no desirable place on which to rest the camera. But to have the tripod when needed, seems like a blessing in disguise. If in doubt with regard to the exposure, it is far better to make two or three different exposures at various lens-openings. How unfortunate, when the opportunity is gone, to find the negative too much over- or under-exposed. If a 5 x 7 camera is used, the Eastman Portrait-Film is easily carried and is extremely light and simple to

handle. The manipulation is the same in developing as with the plate, and several can be developed at one time, but require the use of a larger tray and lots of developer. Even in spite of the advanced prices in chemicals, the developing-solutions do not cost very much and there is no reason to attempt any work by using an insufficient quantity of solution.

In using film when making exterior and interior exposures on the one roll, it generally happens that the interiors are overdeveloped to bring up the exteriors to the desired strength. Then why not make the exteriors, if possible, on one roll and the interiors on another? So many photo-finishers take a film and throw it in a tank to develop and at a certain time it is fished up, fixed, washed and hung up to dry. And in many cases with the varied exposures, it is full of streaks, etc. I do not wish by any means to condemn the tank-system; but I have found the hand-developments to give the better results, if due care is exercised. To make any interior photographs at the Hall, it is necessary to obtain permission from the Curator. One can make all the exterior views without any permission. The guards are polite and can give any information asked of them. And let every American think of this wonderful old spot as the very birth-place of the liberty we enjoy to-day, and thus may we learn—

Pro Deo Et Pro Patria Vivere.

Elementary Retouching for the Amateur

EDWIN L. AUSTEN

I THINK it safe to say that when the average man receives his newly-made portraits from the studio, he has no idea but that these pictures are just "photographs" and, consequently, *must* look like himself. He thinks that the photographer is a man who knows his work, because the subject of the photograph is shown as a pretty good-looking fellow. The amateur camerist has been graduated beyond this abysmal state of ignorance. He knows that most studios turn out photographs only after retouching the negatives and flattering the subject. But there is one thing I don't think that the average amateur knows—that he, himself, can retouch easily, and without months of practice, as some treatises on the subject of retouching would have us believe. Of course, I do not mean to say that he can do the high grade of retouching that is required of the most expensive portraits; but I do assert that amateurs, even those of small natural artistic ability, can soon learn to do elementary retouching, as I shall explain. Such retouching is simple, and eminently worth while.

Although it would not be difficult to construct a retouching-desk at home, no more so than to make the retouching-medium at home, I assume that the amateur has purchased a desk, retouching-medium, pencils and a small bottle of turpentine. He will need nothing else, except a small supply of cotton to clean the negatives and with which to apply the medium.

As soon as the desk is set up, the proper source and amount of illumination must be considered. When artificial light is used, the necessity of diffusing the light as reflected from the mirror is seen at once. Even a frosted electric bulb does not give the correct light. It will occur to the amateur to use ground-glass behind the negative. I have seen photographers retouch with a sheet of ground-glass placed directly behind the negative; but I do not see how it can be done. When negative and ground-glass are placed in such a manner, the grain of the former is visible, making it difficult to obtain a smooth effect on the negative. I have found it extremely important in retouching to have an absolutely smooth and grainless field of illumination. This is obtained easily by separating the negative and ground-glass an inch or more. Thus, when working, the ground-glass is so far "out of focus," that no grain is visible; but a smooth, clear field is afforded—equal to daylight in every way, except that artificial light is more trying to the eyes than daylight. In my retouching-desk, no provision is made for a sheet of ground-glass placed as just described. Any sort of cardboard-holder that can be made quickly and easily is good. When daylight is used, the same diffuser is serviceable; but even the mirror-reflector is not needed with daylight. A smooth sheet of white, glazed paper placed on the mirror—that is inclined so as to reflect a north light—usually gives sufficient illumination. Too bright a light tires the eyes almost as quickly as one that is too dim. The

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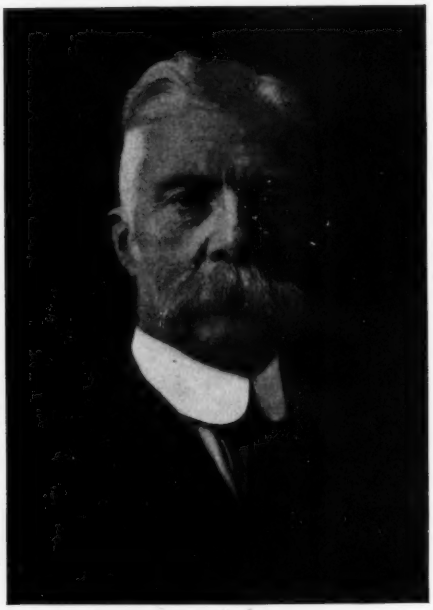

FIGURE A, 1 (*unretouched*)

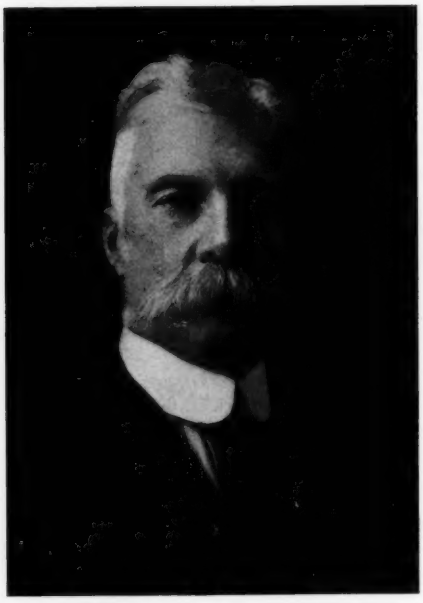

FIGURE A, 2 (*over-retouched*)

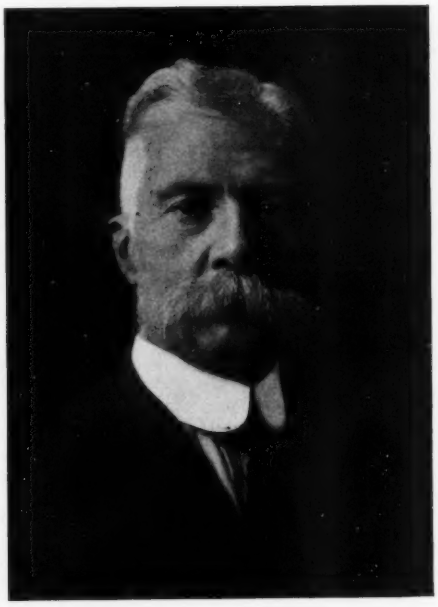

FIGURE A, 3 (*correctly retouched*)

degree and quality of light is important, because retouching is a severe strain even on the strongest eyes. All light, except that penetrating through the negative, must be cut off by a suitable opaque mask, whose opening should not exceed the size of the average portrait-subject. This mask is placed against the glass-surface of the desk. All extraneous rays of light from sides and back must also be cut off, if they are reflected on the negative.

Let us suppose that the desk is set up according to the foregoing suggestions, and that the negative of A, 1 (see illustrations) is to be retouched. First, the negative must be clean. If it is dusty, clean it with turpentine and a tuft of cotton. It may not be irrelevant to remark here that, when removing negatives from the washing-water after development, they should always be sponged, or squeegeed with soft rubber, to remove "pimples" and small foreign particles; otherwise, the lead of the retouching-pencil when it strikes a "pimple" converts it instantly into a pure white "pimple" on the unfortunate subject's face, the moment that the print is made. The point is that the lead in the retouching-pencil makes a heavier—hence more opaque—mark when it strikes or passes over a "pimple" or unusually rough spot in the emulsion. Obviously, the heavier or more opaque this line is made the whiter will it be in the finished print. As soon as the negative is clean and smooth, a

FIGURE B, 1 (*before retouching*)

small drop of varnish is placed on the image—on the gelatine-side, of course. Rub this drop with a tuft of cotton, using a firm, circular motion, until the retouching-medium lies smoothly over the face. Continue to rub it nearly dry—until the cotton has absorbed most of the varnish. This does not mean that the rubbing is long continued—a few quick circles and the negative, after drying a minute or two, is ready for the pencil. That is, it is ready if the varnish is not too thick, or too thickly laid on. A little experience is needed here.

On examining this negative A, 1, many lines are visible, the most noticeable being those on the forehead, under the eyes, and running from nose to mustache. A very primitive knowledge of facial expression makes the amateur aware that these deep lines between the eyebrows give a frowning, troubled expression; that those beneath the eyes and about the nose show age; and the long, horizontal lines across the forehead have little to do with the expression or general aspect. Knowing the subject of the negative well, the amateur discovers that his all-too-microscopic lens has grossly exaggerated not only the lines, but all other defects on the skin. It must be remembered that portraits, such as shown here, made as they were with a rapid rectilinear lens, by an ordinary window, on an isochromatic plate, are really snapshots. There is *too much* detail. Unretouched, the result is no more true

FIGURE B, 2 (*after retouching*)

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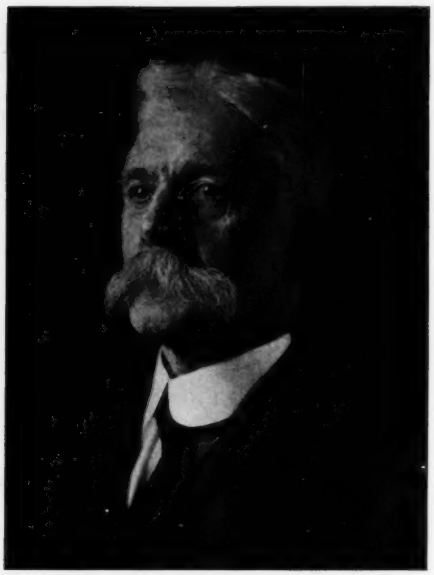

FIGURE C, 1 (*before retouching*)

to life than the greatly over-retouched portraits of the average studio "artist." With these ideas in mind, our amateur knows that unimportant lines must go, and the lines of character must be softened. Figure A, 3 shows a fair likeness of this man; whereas A, 2 shows what over-retouching can accomplish—or undo. The amateur now knows just what he must do; but he has yet to learn how to sharpen his retouching-pencil. Sharpen it to a long tapering point, on fine sand-paper, a file, or any other abrasive surface that is not too coarse. The pencil must be a good one; H is a favorite degree of hardness, although softer and harder leads are occasionally useful. The point should be very sharp, yet not like a needle. The lead-scrapings that stick to the lead must be rubbed off—the fingers are useful for this, retouching-manuals notwithstanding. The point should be smoothed; on paper if necessary.

The lines across the forehead may be removed by *scribbling* gently along the transparent parts. The pencil, in a general way, should be moved in lines similar to the shape of the place to be eliminated. All ideas of "strokes" and "touches" are mere hindrances. The idea to keep in mind is that a certain transparent spot must be built up smoothly to a tone like, or more nearly like, the surrounding parts of the skin. And now the beginner is ready to learn what I consider the secret of retouching, elementary or advanced. The Golden Rule is: NEVER PRESS HEAVILY. If this be remembered, our worker will soon be retouching passably; if not, his efforts will be vain, for every line drawn heavily enough to be visible on the negative will also appear on the print, giving the skin of the subject something the appearance of crazed china. Harder pressure will result in the point of the pencil piercing the delicate film of the retouching-medium; and when this occurs, it usually means that the negative must be cleaned, the medium re-applied and the work begun anew. That deep line-shadow between the eyebrows will tempt one to press a bit on the pencil, in order to fill in the space more quickly. Haste must be made slowly. With an H pencil used on retouching-medium of a proper "tooth" (roughness) the pencil's weight will be almost enough pressure. If he weaves the pencil gently and carefully across the spot, the amateur will find that the spot will disappear presently and that even a close inspection will fail to discover any but an occasional cobwebby line on the negative. A tone, almost as if applied by a brush, is the result of correct retouching. The eyes should be kept at reading-distance from the negative, except in filling in tiny wrinkles or defects in the skin. It will be seen very soon

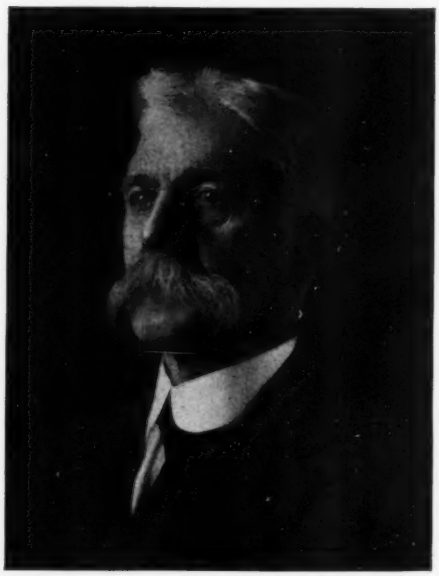

FIGURE C, 2 (*after retouching*)

that it is impossible to get a smooth effect if the eyes are kept closer to the negative.

A glance at the "before" and "after" of B shows that very little was necessary with this subject; but the little work done was certainly worth while. The retouched portrait is a much better likeness than the unretouched one. This sort of negative, "sharp" all over, is very much harder to retouch than a negative made with a studio-lens; but one will find many persons who still prefer these sharp photographs to the softer studio-prints. If sufficient contrast exists in the negative, it is much better to print it on a soft grade of paper, as then the retouching is not so likely to show. Of course, papers like Azo Hard-X are out of the question. The accompanying prints were on Azo Hard (normal) developed in Amidol—a soft-working formula.

Photographing Children

THE photography of children calls for patience and some appreciation of child-nature. What can be obtained from a grown-up by a simple direction must be drawn from a child by tact.

The most telling point in a child's picture should be its naturalness. Mothers, unfortunately, put a handicap on naturalness when they dress children in their best bib and tucker, regardless of the fact that the child is least at ease and natural in clothes it is unaccustomed to wear except on formal occasions. Whenever possible, the child should be dressed in its regular, every-day clothing—something old and soft, and especially something that is not *entirely white*. The most hopeless thing to manage is a starched dress; it makes a pleasing picture impossible.

After a cordial, not to say confidential, understanding has been established between the juvenile sitter and the photographer, the picture-making can begin. Never attempt to use a black background; it will appear harsh and is unsuited to such subjects. A white canvas background should be used. Any shade from white to almost black can be obtained by turning it to or from the light-source. With very young children, whose movements call for rapid exposures, a white cloth spread on the floor will help considerably.

Generally speaking, a child should hardly ever be posed. The chief fault in child-portraiture is self-consciousness. Most children suffer from it when asked to do anything unusual, and it must be guarded against. The strong-willed child which simply will not relax, must be humored by some imaginary exposures; then when it thinks you are through, it will become natural, and a few real exposures can be made with possibly good results.

As a rule, children are best photographed in a standing position. They spend so much of the time on their feet, and are more natural standing than sitting. Beware, however, of keeping them standing too long in one position; they soon tire and get bored unless there is some action. The child's interest must be held at the moment of exposure.

Accessories should not be introduced except as a last resort; they add to the difficulty of composition and set up a certain amount of competition with the subject.

Lighting and exposure are two important points. The lighting had better be somewhat flat, with top-light eliminated. White walls and surrounding screens will help to reduce the exposure considerably and, at the same time, soften the shadows materially. An underexposure against a white background is apt to show the kiddies' little hands and legs many shades darker than nature and their nationality indicate.

The greatest mistake made by photographers in managing children is the lack of appreciation of the child's state of mind during the whole affair from the time of leaving home until the last exposure is made. They are excited with the novelty of the idea. The studio is a place of new and strange sights, and it is not to be expected that the child can be perfectly natural and at home until it has taken in and appraised all the novelties. As the strangeness wears off, the photographer can begin to assert himself. This had better be done in a quiet, unassuming way. Bluster and excitement on the operator's part will do more harm than good. Except in the case of very young children, when help is necessary, parents or friends should not be allowed to remain in the studio. The photographer must have complete control over his sitters. He must then be guided by a quick perception of the character of his little subject. He must know how to subdue the excitable ones and how to draw out the shy. Then with quick, quiet manipulation of camera and plateholders, he must make a series of exposures from which a desirable selection can be made.—*Photo-Digest.*

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The Pictorial Value of Simple Material

WILLIAM S. DAVIS

ATTENTION has been called many times to simplicity in composition as an admirable quality; but, as this can be achieved when dealing with complex subjects on a grand scale, it is not synonymous with the utilization of very simple, commonplace, material in the production of beautiful pictures. The idea of calling attention to the latter at the present time suggested itself while looking over some studies made from modest—and in some cases unpromising—subjects. I have selected a few illustrations in the hope that these examples may be of value to suggest uses for similar material near at home.

A point often lost sight of—or, perhaps, not even considered—by beginners who aspire to make artistic photographs is the difference between a "picture" in the artistic sense, and a view-record or illustration. The latter, when at its best, is a mechanically perfect memorandum of all the details within the scope of the lens, the attractiveness of the transcription depending mainly upon whatever obvious beauty may exist in the objects composing the scene. A picture, in the higher sense of the word, must stir the imagination of the beholder through a personal impression *beautifully expressed;* beauty, in this case, meaning the technical skill on the part of the artist in weaving the parts together into a harmonious whole which shall make visible the message he wishes to convey. The theme may indeed be an abstract emotion, such as the sensation of repose, motion, warmth, etc., expressed by some particular arrangement of tones and lines, which serve much the same end that tonal effects and rhythm do in music. Again it might be a more realistic idea or story-telling action that constitutes the foundation around which the composition is built in such a way as to make the motive clear. However this may be, the beauty or grandeur of the theme does not of itself ensure the production of a great work of art, any more than the attempt to express such a thought in words without regard to their choice and arrangement would give the world a literary masterpiece. Just as the greatest ideas are often expressed most powerfully by a masterly use of simple words, so the pictorial worker with a message finds that the simplest natural forms in nature can be made to express great things. The play of light on the petals of a single flower expresses the cheerfulness of sunshine and light as effectually as would the representation of a field abloom. Indeed, the concentration of interest in the simpler composition would be more expressive as a rule. In the same way, a feeling of winter's cold can be conveyed by a snow-covered porch with the same force as though a range of white-capped hills were used, the objects employed being simply mediums or symbols of expression; so that whatever object,—through the power of familar association with the thought or idea—will call the thought to mind may be used to advantage. One might go on indefinitely along this line if an attempt were made to enumerate the many possibilities in the common things at hand; but my intention, rather, is to induce others to look for themselves, and the nearer home the search is begun the sooner will latent possibilities be discovered.

Very often accidental effects—such as the combinations formed by objects in everyday use in home or office—prove striking in character; and, even if not directly available, the remembrance of such effects will often prove of the greatest help at some future time. One of the most interesting still-life compositions I have seen recently depended for its attraction upon the big shadow thrown upon the wall by an ordinary household-jug placed on a table—the source of illumination being a lighted candle. Although the study, as photographed, was probably carefully arranged, I have no doubt but that the idea had been suggested at some previous time by noting a similar accidental effect. Such subjects are constantly met with, yet seldom utilized; not, of course, that I would advise every reader to go forthwith and picture jug-shadows, but it affords an excellent example of independent thought and observation that is worthy of emulation.

Let us return to the necessity of expressing a theme beautifully. This, in the first place, necessitates harmony and balance of the lines and tones which go to make up the composition. Since the photographer cannot follow the painter's example by starting with a blank surface and building the composition line by line and tone by tone until the whole is satisfying, the result usually has to be obtained by eliminating the non-essentials so far as possible; then by selecting a viewpoint from which the remaining material presents the most harmonious effect.

The important part played by light in the making of a composition must never be lost sight of, for it is a magic wand. Naturally, without light there could be no differentiation of tones and

BY THE WATERSIDE — WILLIAM S. DAVIS

colors; and, this being true, it follows that any change in the character of the lighting must produce a change in the subject. This alters both the arrangement and scale of tone-values, even the shapes of solid objects often appearing to vary as the direction of the light which plays over their surfaces is changed; and the shapes of cast-shadows—which are just as important elements in a composition—are determined wholly by the direction and intensity of the lighting.

As certain lines and tones convey sensations of their own, aside from what may be suggested by familar objects introduced in a picture, the experienced worker takes care to keep both in harmony and make the subconscious effect of the former contribute to the theme, thus strengthening the general impression it is wished to convey. A strong horizontal line, or tone-mass, for instance, when it is a dominant note in the composition, suggests repose; and it can also be made to contribute to an effect of broad, far-reaching, expanses. The sinuous curved line is seen in the most beautiful of nature's forms—in trees, clouds, natural shore-lines and winding streams. It would be impossible to imagine a graceful animal or human figure devoid of curves. The rhythmic quality inherent in curves is expressive of continuous sweeping motion. Strong angular lines, more or less mixed with curves, are found in subjects containing violent action. However, when angles and straight lines predominate, as in an architectural subject, the restless quality of the angles is nullified by the stability of the straight lines, unless the composi-

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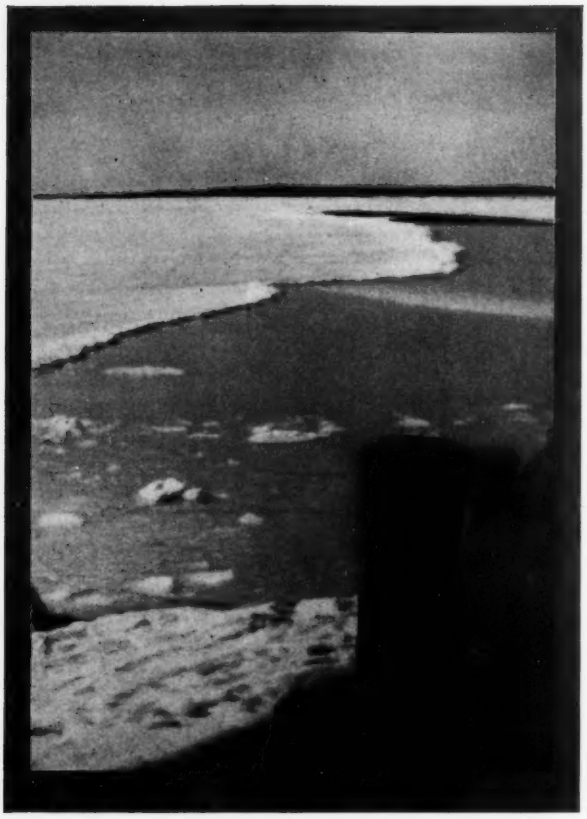

DRIFTING ICE WILLIAM S. DAVIS

tion is so badly arranged that the principal mass forms an unbalanced triangular, wedge-shaped element. Repetition of an important line upon a different scale sometimes adds to the rhythmic feeling; but when overdone, it makes the composition monotonous and weakens the concentration obtained when minor parts of different shape preserve, by contrast, the freshness of the dominant note.

Balance in any picture, other than a pure-line-drawing, is largely obtained by the proper distribution of varying tone-masses; a larger spot of half-tone rightly placed, being equal to a small area of light or dark tone. Variety is produced between two tones of similar value by differences in shape. One reason why the design of a good picture holds the attention longer than that of a geometric pattern is due to the fact that the latter is a repetition of a few units, which, once traced, reveals the whole. In a skilfully composed picture virtually every spot is either a different shape or tone, this being quite as true of a photograph as of any other means of expression. Nature does not produce two things of the same kind which are identical in every way. There may be great similarity; but, whether it be a tree-branch or a cloud, close study will reveal some little variation in form.

The key—i.e., the general tonality—of a picture should be made to help express the mood, whether cheerful or subdued. One cannot expect to suggest the sense of space and light in a breezy sunlit open landscape by making the finished picture in a low tone and while it is equally un-

LIGHT AND SHADE WILLIAM S. DAVIS

natural to try to render a somber thought by a high-key effect; yet, such mistakes have been made,—there even appear to be cycles of fashion, especially among groups of pictorial photographers, when the greater part of their work appears to go toward one extreme or the other without much regard to the fitness of things.

As the subject of composition is far too large to be more than lightly touched upon within the limits of a few magazine-pages, I would suggest that those who wish to go deeper into the subject can find books well worth studying. The analysis of pictures as well as nature is the most helpful way to note how theories work out in a practical way, and also enables one to discover weak spots in some composition. I shall leave it for readers who care to do so to study most of the accompanying illustrations in this manner. As a beginning, take the one called "Drifting Ice," and see how the few units of which it is composed serve their purpose. The angles and vertical lines of the wharf in the right lower corner afford contrast to the horizontal and curved lines beyond, and the depth of tone strengthens the aërial perspective and luminosity of the lighter parts. The edge of the ice-field provides an agreeable curved line which leads the eye along until stopped by the straight gray line formed by the opposite shore, which itself helps to give repose and stability by opposing the slanting tendency of the other lines. Since the scene lacked any single object or point of interest to hold the eye near the center of the composition, the highlights upon the ice-field had to serve; but these could not have been used in this way were it not that the sky and space between the wharf and drift-ice is lower in tone. These two areas also had to furnish nearly all the middle-tones for the picture.

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There are only four major tone-spots in the entire scene, three of which are comparatively near one another in value, and light in key,—this simplicity helps the feeling of space. On the other hand, some may feel that the distant shore-line, and the shorter line running parallel with it—the space of open water amid the ice in the distance—are somewhat too insistent, and the mass of rough ice filling the space at the bottom of the picture between the wharf and left margin not ideal in shape. However, the reader may have the satisfaction of studying the remaining subjects, which, even though found defective in some particulars, will demonstrate, I trust, the value of simple material.

Where We Stand in Color-Photography

THE circumstances of the past four and a half years have been necessarily very unfavorable to progress in arts such as that of color-photography; and, therefore, there may be many readers of these lines in distant parts of the world for whom, at the present time, the so-called "color-plates," producing color-transparencies, stand for what they understand by "color-photography." But these screen-plates, the Autochrome and the Paget, admirable as they are, represent only a special form of a color photographic process, though certainly for the purposes of the ordinary photographer they are the chief materials to make photographs in natural colors. Hence, some review of what has been done and of what may be done along other lines may be of interest to many whose acquaintance with color-processes is of comparatively recent date.

There is no need on this occasion to go back as far in the history of color-photography as the processes chiefly due to the inventive and mechanical genius of Mr. F. E. Ives, now of New York, except to say that the optical color-effects which were produced by his Kromskop and lantern Kromskop were probably as perfect renderings of color as have ever been produced. Yet, beautiful as they were, public-taste naturally asks for something more tangible than an image upon a lantern-screen or the optical assemblage of three separate images in a viewing-apparatus. The public wants, or thinks it wants, prints in color, and still nurses a qualified dissatisfaction that the results by the Autochrome and Paget processes are obtainable only as glass-transparencies. Here, perhaps, a word may be said on the purely human elements in the case. We need to distinguish—in forming an estimate of the value of any process of color-photography claiming to yield paper-prints—between the requirements of the purely amateur photographer and of the people who would use such a method for commercial purposes such as portraiture. The amateur undoubtedly would welcome with delight a color-process, even one with imperfections if it involved no more delicate manipulation than that necessary in ordinary black-and-white photography. In the case of the professional maker of portraits, it is to be considered that at present he has at his command processes for coloring which in many cases are not expensive and which, moreover, possess the very greatest latitude, enabling him to produce results beyond the powers of a hard and fast color-process, and for commercial purposes more useful. In judging the results by any new color-process the judgment must be entirely on their merits, and after elimination of any reproach attaching to them from the fact that they are made by purely photographic methods instead of by the skill of a colorist. One could perhaps sell color-photographs for a little while as curiosities; but the experiment has been tried, with the result that the public was found to judge always by results and was not particularly concerned as to how they were obtained.

When we review the methods which have been used for making actual color-photographs on paper by the so-called subtractive processes, we see that a method capable of being reduced much more fully to a working-system is necessary before any such process is likely to come into general use either by the professional or the amateur. No doubt, many readers of this article have heard of color-prints by the Sanger-Shepherd process, although few no doubt—unless they have worked the process for themselves—have seen any. A process capable of very fine results, but calling for a degree of care and observance of detail beyond the inclination of the amateur in these hurried days and commercially too elaborate for the professional. Very much the same may be said of the making of three-color prints by the carbon-process which also, in expert hands, has yielded beautiful results. In the form of the Raydex process, in which pigmentation is done according to the Ozobrome method, three-color

OLIVE GROVE NEAR SASSO G. R. BALLANCE

carbon-printing has obtained a measure of simplification, one element in which is that the printing is done in the first instance on bromide paper and does not require daylight at any stage. When we have mentioned these three processes, we have singled out, perhaps, those which yield beautiful three-color prints from the sets of color-sensation negatives, but which nevertheless are processes for the few. We should hardly be inclined to include Pinatype among them for the reason that the best three-color prints by this process which we ever saw had a "dye-y" look. This process for the purposes of three-color printing may be said to be dead, if it was ever really alive.

On the other hand, within the past few years progress has been made in giving a greater facility to these methods in which three-color images are assembled in register to form the print in natural colors. Mr. Ives has done much in removing difficulties of manipulation by his invention of the Hichrome process, the development of which has no doubt been hindered by the disturbed condition of the world. Another experimenter, Mr. A. Hamburger, has contributed much experiment on these lines. His Polychromide process, which was for a time systematically worked in the making of portrait color-prints, consisted in the assemblage of a yellow image produced by toning, a red-carbon image and a blue image, again produced by chemical toning of a developed bromide print. Still more recently he has worked out methods, designed in the first instance for the production of Kinematograph color-films, whereby a monochrome silver-image is simultaneously bleached and caused to take up a pigment or dye. A simplification such as this, as can be readily imagined, will do much to reduce the making of composite color-prints to a simple operation. Further developments by both these inventors should be watched by those who are interested in the subject.

Even in such a general sketch as the present one, mention should be made of the somewhat old and now almost obsolete process known as the "bleach-out," for which at one time or another great hopes have been entertained—chiefly, however, by the inventors. Of course, the principle of the process is, that a mixture of three dyes, say red, yellow and blue, each separately bleached by light is made to yield a black film. After exposure, any given dye is bleached by light

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which it absorbs with the result that theoretically a film constituted as just described should become red when exposed to red light, blue when exposed to blue, and so on. Unfortunately, the endless reactions of dyes upon each other and of the vehicle upon them, as well as the different effects of substances added to render them more sensitive, form a set of variable factors which make the process exceedingly complicated. The late Dr. J. H. Smith devoted half a lifetime to this process, and his work and many writings upon it may be said to have done no more than to show the very unpromising nature of color-photography along these lines. It is to be remembered that for the bleach-out-process a positive—in colors—is obtained from a positive, on which account it was thought that the method offered the opportunity to reproduce on paper the beautiful effects produced on Autochrome plates. However, the best result of this kind which we have ever seen was a shocking travesty of the quality of the original.

To turn to color screen-plates, the so-called "Color-Plates" represented by the Autochrome and the Paget, we may be justified to think that so far as the plates themselves are concerned, manufacture has become fairly stabilized, and the color-worker who seeks either a plate to make a single transparency or one for the production of a number of duplicates is well provided for by the respective products of the Lumière and Paget companies. But what the amateur worker undoubtedly hankers after is a means to make from one or other of these color-transparencies color-prints on paper. So far, no such process—or, at any rate, none worthy of the transparencies themselves—has been offered; but a process with this end in view was patented some six years ago by Messrs. Julius and Ernest Rheinberg. The war, unfortunately—or, perhaps, one should say fortunately—has drawn Messrs. Rheinberg into the manufacture of optical munitions; but, perhaps, they will now have the opportunity to proceed with their process, the essential feature of which is the transfusion of minute color-elements such as those on the color-screen plate, through the agency of suitable chemical means, so as to form a textureless color-print. This, again, is a development which, from the nature of the problem, cannot be rapid; but is nevertheless one which will be watched with interest.—*The British Journal.*

Determining the Focal Length of Hand-Camera Lenses

RALPH E. BAIL

HARDLY a month passes but some new method of determining the focal lengths of lenses appears in one or another of the various photographic magazines. But so many of them require the use of double-extension bellows or focusing-backs, that the undermentioned method may be of interest, especially to users of hand-cameras.

Place a mark on the side of the camera in such a position that it lies in the same plane as the plate or film. Then, after racking out the bellows nearly as far as it will go, focus sharply on some flat object of such a size that its image on the focusing-screen will be one inch or so in length. In case a roll-film camera is used, the focusing may be done by stretching a piece of white paper across the rolls in the back to serve as a screen. Now measure the length of the object, the length of the image, and the distance between the object and image (this last measurement being made from the object to the mark on the side of the camera). The focal length of the lens used is then calculated from the equation $F = \frac{D \times O \times I}{(O + I)^2}$ in which F represents the focal length of the lens; O the length of the object; I that of the image, and D the distance between object and image.

For a simple illustration: suppose the lens to be focused upon a 12-inch rule and, on measuring the image is found to be 1 inch in length and the distance from the rule to the image 84.5 inches. Then the focal length of the lens would be $\frac{84.5 \times 12 \times 1}{(12 + 1)^2} = \frac{1014}{169}$ or 6 inches.

TRY to identify yourself with nature, let it possess you, and then reproduce it, not in external form merely, but with every beautiful, solemn, sacred and secret suggestion that it conveys to you.—*J. Bosboom.*

From The National Parks Portfolio

MISTS IN THE MOUNTAINS, MT. RAINIER NATIONAL PARK

CURTIS AND MILLER

A Homemade Folding Retouching-Frame

JOHN DOVE

FOR some time I have been using a homemade retouching-frame with great satisfaction, and I give here a description of it that I think will be of interest to the readers of this magazine. Even if one does not do any retouching, in the accepted sense of the word, the frame will be found a great help to spot out pinholes in negatives. It is simple and can be easily made. The material needed for its construction may be found in nearly every household.

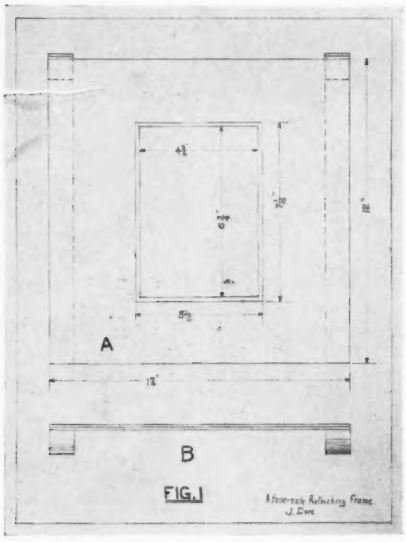


FIGURE 1

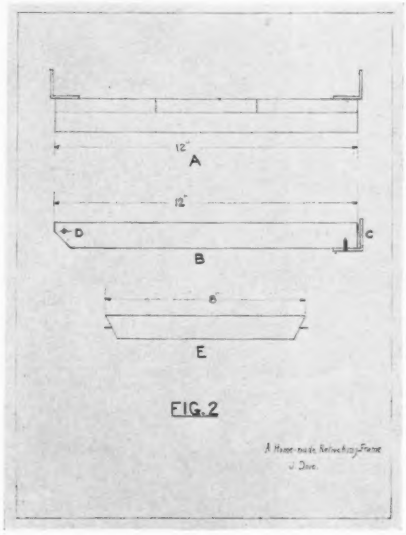


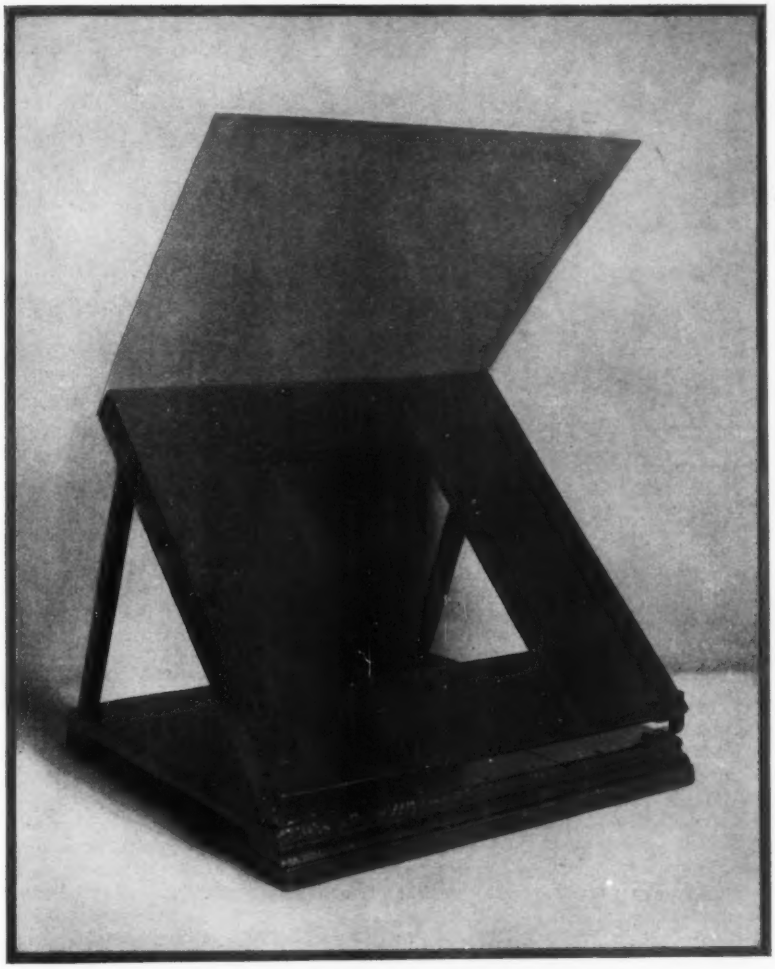
FIGURE 2

The material required comprises three pieces of heavy cardboard 12 x 12 inches; four small angle-irons, which are simply thin iron-strips two inches long and one-half inch wide, bent like an L, with a small hole drilled through it near each end; six small screws; a few small wire-nails and brads; a bottle of glue, and an old soap-box.

Take two pieces of cardboard and with a sharp knife cut an opening 4¾ x 6¾ inches in the center of one of them; and, in the center of the other, cut an opening 5 1/16 x 7 1/16 inches. Care must be taken to get the corners of these openings exactly square. Next, cover one side of each of these pieces of cardboard with glue and bring them together, taking care to get the edges flush so that the openings will register properly. They should then be put under pressure to dry. When they are dry, the result will be the negative-holder shown at A Figure 1. The negative will fit into the opening in the upper cardboard, and the under cardboard, having a smaller opening, will keep the negative in place.

Knock the soap-box apart and from one of the ends, which will be about 7/8 inch thick,—a little more or less will not matter,—saw two strips, two inches wide and twelve inches long; saw with the grain of the wood and not across it. Nail to these strips enough of the thinner boards from the box to make a base twelve inches square. If one happens to have a board twelve inches square, it would make a neater piece of work. This base should be well smoothed with sandpaper, and an angle-iron screwed to each of the two corners forming the front. The uprights of these angle-irons should be slightly more than twelve inches apart. This is shown in the end-view of base at A Figure 2.

Now, from the end board of the box saw four strips just as wide as the board is thick. Two of



RETOUCHING-FRAME
JOHN DOVE

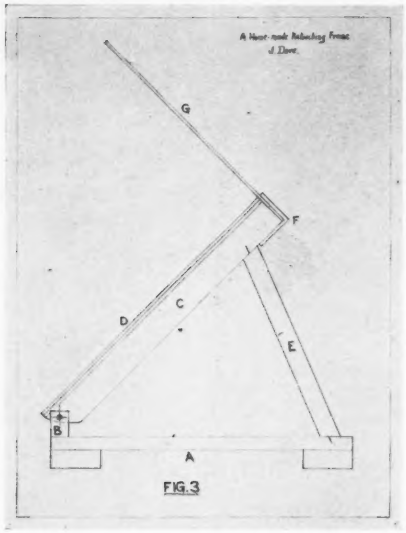


FIGURE 3

these strips should be twelve inches and the other two eight inches long. Smooth these with sandpaper. On one end of each of the twelve-inch strips screw an angle-iron. These should be adjusted so that one leg of the angle clears the end of the strip far enough for the remaining piece of cardboard to be inserted. The other ends of the strips should be beveled and a hole, the size of the screws to be used, should be made with a small gimlet or drill about one-quarter inch from the level. This is shown at B Figure 2; C is the angle-iron; D is the hole. These strips are now glued to the under edges of the cardboard negative-holder as shown by dotted lines in A Figure 1. After the glue has set, it is well to drive in a few small brads to make all secure. B Figure 1 shows an end-view.

Place this negative-holder between the angle-irons on the base, so that the holes in the strips are opposite the holes in the angle-irons, then fasten with screws. The negative-holder pivoting on these screws can now be raised to any angle. Prop it up at forty-five degrees and bring the eight-inch strips to the edges of the base and negative-holder, so that one can mark the angle at which these strips should be beveled, in order to hold the negative-holder in the correct position. After one has beveled these strips, drive a brad into each end leaving about one-quarter inch projecting. E Figure 2 shows this. Small holes should be drilled into the under side of the negative-holder strips and into the base, to receive these projecting brads and hold the parts tightly.

The remaining piece of cardboard is now inserted between the end of the negative-holder strips and the angle-irons in the space provided for it, in order to shade the face of the negative from strong light, except that coming through it from below.

If these directions seem complicated, a careful study of Figure 3 will make everything clear. A is the base; B one of the angle-irons on which the negative-holder pivots; C is a wood-strip which is glued to under edge of cardboard D; F is the angle-iron screwed to under side of strip C, which supports cardboard-shade G. The whole frame, both wood and cardboard, can be given a coat of varnish, if one desires a more finished appearance.

In the photograph of the finished frame, it will be noticed that I have a piece of molding under the base instead of the plain wood-strips. This does not make the retouching-frame any better; but I had this molding on hand and used it up in this manner. The instructions given here make a frame for 5 x 7 negatives; but they can be changed to fit any other size. When not in use, the frame folds into a space of 12 x 12 x 2½ inches. I am sure that this retouching-frame will be worth the time, effort and slight expense to make it.

IN that helpful book of his on Landscape Painting, Birge Harrison says that his years of study and practice in landscape-composition have led him to be dead sure of but one rule: "Thou shalt paint but one picture on one canvas." As I tried to point out in the last chapter, a picture says one thing, has one supreme center of interest to which everything else inside the frame is subordinate. Within the limits of a picture, all the various elements counterbalance one another in such a way that the whole is static, at rest, complete, every part happily contributing to present vividly the subject of the picture. The aim of the picture is to praise, to exalt, to glorify that one subject. The subject may be anything—a single object, a group, a comprehensive movement of line, an orderly sequence in color, a striking bit of space-division, a pretty dapple of dark and light, and an atmospheric effect, a gleam, a glint, a reflection, a surprising combination of elements that creates a mood. The range is limited only by the artist himself.

Henry Turner Bailey.

RESIDENCE-SKETCH EDWARD LEE HARRISON

Photographic Results Without a Lens

EDWARD LEE HARRISON

FIVE thousand years ago the Egyptian astrologer, standing at the bottom of his stone-observatory shaft, situated with mysterious precision in the side of a mighty pyramid, studied the celestial image thrown upon his tablet by the converging rays from an orifice in the stonework. That he made use of the data afforded by this primitive camera is certain. And there is reason to believe also that some sort of photographic impression was retained for reference.

The Babylonian, with his special genius for astronomical observation, also made use of the "pinhole-camera," and we find a record of an elaborate contrivance of the kind built for celestial observation at Nimrud.

The Phœnician carried the invention to Carthage, Rome seized upon it, and the necromancer of the Middle Ages reveled in its possibilities, albeit he looked upon it essentially as a means to cajole the ignorant.

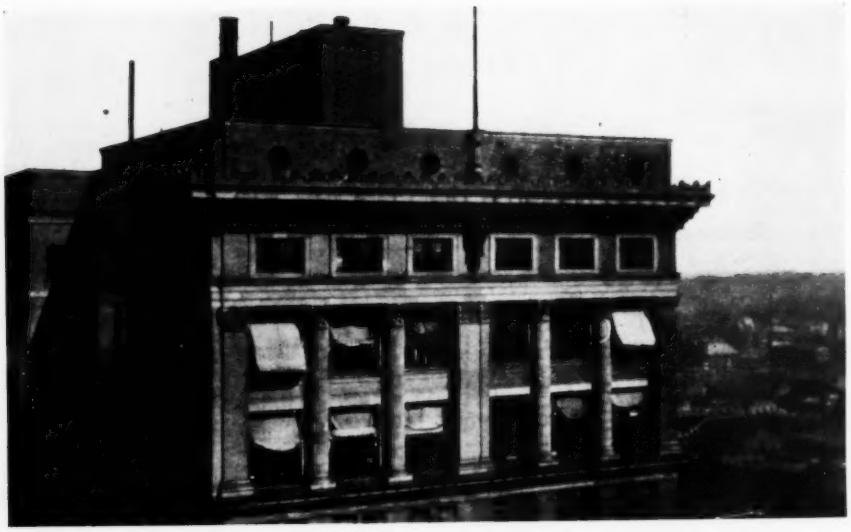
Yet the chief astronomers of England and France did not so consider it, and volumes have been written by learned scientists upon its principles and their application.

Lord Rayleigh was fascinated by the subject, and devoted much time to study of the pinhole and its properties. Indeed, most of the formulæ and tables given herein are worked out from his calculations.

Many interesting articles have been published in the photographic journals regarding pinhole-photography, yet the matter does not appear to have been regarded in any light other than as an interesting experiment, and its real possibilities and the scientific principles which underlie its operation have not been featured. As a matter of fact, the pinhole, properly made, is an exceedingly useful addition to any artist's photographic equipment.

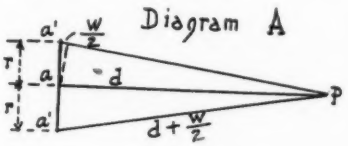
The pictures which illustrate this article may suggest some idea of its range of usefulness, and an effort will be made to supply complete data concerning the methods and apparatus used in making them. Several of these views have been marketed in various ways, without suspicion that they were made without the ever-present and indispensable glass-lens.

The chief characteristic, and, likewise, the principal advantage of the pinhole, is its universal focus and its extraordinary angle of view. Its chief drawback is that time-exposures are re-



CITY-GIANTS
FROM MY OFFICE-WINDOW
EDWARD LEE HARRISON

quired. Undoubtedly, the first consideration in the manufacture of such a "lens" is to obtain the maximum definition. When made properly, this instrument will produce work not dissimilar



to a first-class semi-achromatic objective, rendering definition sufficient for general purposes.

For the size of the aperture, we shall have reference to Lord Rayleigh's formula, and shall endeavor to indicate the calculations and give data for the most useful focal lengths. After having given the theory of the case, we shall show that the apertures given by the scientists may be reduced about twenty per cent with consequent increase in sharpness of image, and indicate the reason therefor.

The wave-length of blue-violet light, which is the chief light to be photographically considered, is approximately .0004 millimeters. Now, in order that the light-wave may pass through the lens-orifice without rebound or diffraction, Lord Rayleigh deduced a formula, which is appended, together with a table of openings worked out from this formula, see diagram A.

The limit of retardation of light being taken at $\frac{w}{2}$, w being the wave-length of photographic light, = .000016 inch, or .0004 mil.

r = radius of pinhole.

d = focal length.

$$r = \sqrt{d\,w}$$

$$\text{and } d = \frac{r^2}{w}.$$

Therefore, the distance from the pinhole to the plate-square of the radius divided by the wave-length, say .0004 mil.

$$a\,p = d + \frac{w}{2}$$

Angle $a\,a'\,p$ = right angle.

$$r^2 + d^2 = \left(d + \frac{w}{2}\right)^2 \quad \text{(Euclid I, p. 47).}$$

$$\text{Therefore } r^2 = \left(d + \frac{w}{2}\right)^2 - d^2.$$

$$d^2 + d\,w + \frac{w^2}{4} - d^2 = d\,w.$$

$\frac{w^2}{4}$ is very small and may be omitted.

$$\text{therefore } r = \sqrt{d\,w}.$$

$$\text{and } d = \frac{r^2}{w}.$$

Therefore, distance from pinhole to plate = sq. of rad. ÷ length of wave.

This will give a table for the various focal lengths as follows, see table B.

Dr. Miethe's formula gives similar results. Yet a practical test will soon demonstrate the possibility of reducing the apertures some twenty per cent, with increase in quality of definition. The most probable explanation of this seems to lie in the supposition that the "pinhole-lenses" used by the scientists were drilled straight through a thin sheet of metal, whereas those used by the author were drilled straight through and afterwards reamed to a knife-edge, therefore avoiding rebound and consequent diffraction. At any rate, the best results were obtained with the sizes given in table C, on next page.

Table B

Needle Number.	Diameter in Inches	Focal Length.	Diaphragm. f. System.
1	1/22	32"	700.
2	1/23	28"	640.
3	1/26	23"	600
4	1/28	20"	560
5	1/31	18"	460
6	1/34	13"	440
7	1/37	10"	390
8	1/44	8"	350
9	1/49	6"	290
10	1/54	5"	270
11	1/60.	4"	250

The pinhole-objective once completed, it will permit the use of any form of camera. The pictures shown herewith, were made with several types of cameras—from a wood-box to a graflex. The pinhole was made on a thin sheet of sterling silver, carefully pierced and reamed. Several sizes were employed, accurately measured with a micrometer.

The reflecting-camera may be utilized by making a twin-lens, with one opening of the regulation pinhole-size, and the other about one-sixteenth of an inch in diameter, for focusing.

There is no doubt that really excellent and, in some cases, unusual results can be obtained with the pinhole in the hands of a competent photographer. Recently, the second prize in a southern competition was won with such means, the

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judges thinking they were awarding the prize to the possessor of a high-grade semi-achromatic lens.

Landscapes with a lacy foreground and excellent perspective may be obtained, if the day is not windy. For architectural work, the absolute rectilinearity, the uniform definition and extensive angle of this natural "lens" are very desirable.

Another advantage grows out of the twenty or thirty seconds exposure that are required. A picture in congested regions may be made with calm disregard of the passing public, as they will not be recorded on the plate. Several of the views, shown in this connection, were made in the presence of traffic.

As the size of the image varies directly as the focal length, we find:

$$\text{Size of object} \div \text{by} \frac{\text{dist. obj. to pinhole}}{\text{dist. plate to pinhole}} = \text{size of image.}$$

Example: Focus 6″, object 30′ distance, 10 feet high. $120'' \div \frac{360}{6} = 2'' =$ Height of image.

Regarding wide-angle work, a 3½-inch focus lens on an 8 x 10 plate yields an angle of 142 degrees, which compares favorably with the best wide-angle lenses. However, the lens must be perfect, and mounted specially to get this extreme angle.

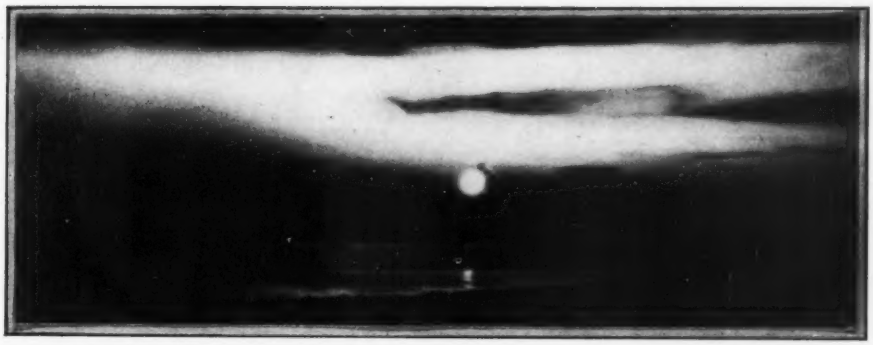
Exposures are not difficult to figure out, but can scarcely be guessed. Instituting a comparison between an F/4.5 lens and a pinhole 1/50 inch in diameter, we have: $\left(\frac{9 \times 50}{4.5}\right)^2 = 10{,}000$, or the number of times we must multiply the exposure required of an F/4.5 lens. We will assume that the time is 1/300 second for the latter in good light. This would give a value of 33 seconds, which is a little excessive in good light—due, possibly, to the fact that no glass-lenses are employed, and the light travels absolutely unobstructed to the plate. Reduce this exposure about one-third, giving twenty-two seconds, and it will be found about right for the same conditions as justify an exposure of 1/300 second at F/4.5 with a fast anastigmat lens.

Table C

Focal Length.	Pinhole-Aperture for Maximum Definition.	Allowable Limits.
3″	1/100 Inch.	1/70 to 1/120.
3½″	1/90 "	1/65 to 1/110.
4″	1/80 "	1/60 to 1/100.
5″	1/75 "	1/55 to 1/95.
6″	1/70 "	1/50 to 1/90.
7″	1/65 "	1/45 to 1/85.
8″	1/60 "	1/40 to 1/80.

Regarding the effect of diffraction mentioned above, the author has been unable to discover any trace of this phenomenon in pinholes as small as 1/75 of an inch, the image continuing to grow sharper to this limit, and remaining virtually unchanged to 1/100 inch, beyond which noticeable loss was shown.

When using anastigmat lenses, the matter is different. Not so very long ago we tested the matter. Knowing that with smaller stops sharper definition and greater depth of focus were obtained, we decided that if a little was good, more would be much better, and made a number of architectural photographs with a stop of about F/560, with results which closely resembled an earthquake in a fog. Upon consulting the authorities mentioned above, we found they had collected all this long before we began, and the allowable limit is set at F/72, or thereabouts. At this juncture in the proceedings, we returned the volume to the public library, with our benediction. Sometimes, science is very annoying. It has no sense of humor, at all.



MOONRISE ON
THE MISSISSIPPI
THE VEILED MOON
EDWARD LEE HARRISON

XUM

Protection of Paper Against Moisture

ONE of the first precautions a photographer should take in damp weather is for the proper storage of paper. A workroom that contains sinks is more likely to be damp than any other part of the studio. If possible, have a dry cupboard for paper outside the workroom.

It is a common practice to open a box of paper, remove the wrapping and place the paper back in the box, leaving it unwrapped until it is used up. It is a better plan to take out the paper that is needed, wrap the rest and place it where it will keep dry. There is no need to expose an entire gross of paper to the damp air of the printing-room when only a few prints are to be made.

As fast as exposures are made, the undeveloped prints are usually placed in a second box kept for this purpose. If this box is kept in the work-room, it is very likely to become damp and prints will also become damp if left in this box for any length of time before they are developed.

The latent image will fade if exposed prints are not developed for some time; but it will fade more rapidly if the paper becomes damp than if it remains dry. Even a few hours will sometimes make a marked difference, and experiments have shown that under extreme conditions of moisture half an hour is sufficient time for an image to fade if it comes in contact with a damp surface.

There is no known remedy and the best means of prevention is to develop prints as soon as possible after exposures are made.

There is no excuse for allowing prints to lie over night before they are developed and, to maintain uniform quality, it is not advisable to allow them to lie even for a few hours.

When the latent image fades, the print has the effect of having been underexposed. If the printer does not know this and has allowed exposures to stand for some time before development, he may imagine that he has been under-exposing, that the intensity of his light has decreased or that he has an emulsion of paper that is slow. The trouble can readily be detected if a print is made and immediately developed. If the print develops properly, the trouble is not with the paper or the printing-light, but is due to this fading of the undeveloped image.

If one has no dry place to store paper, it is advisable to have a drying-box made for this purpose. Any air-tight tin box, large enough to hold the stock of paper, can be made to answer the purpose. The important thing is to have it air-tight. The simplest way to keep the air in the box dry is to have a compartment in which to store calcium chloride. This will absorb any moisture admitted when the box is opened. The calcium chloride should be placed in a tin box with a perforated cover, and, as soon as it becomes damp, it should be dried in an oven. It may be used over and over again and will keep the air in the box thoroughly dry if it is dried as often as it becomes moist. The paper should never be allowed to come in contact with the calcium chloride, as it will cause spots. The box should not be left open longer than necessary.

Calcium chloride may be purchased in anhydrous form and so used, or it may be made into a saturated solution and added to the commercial form of asbestos until a thick paste is formed. The asbestos merely makes the calcium chloride more convenient to handle in drying.

Photographic Digest.

UP-RIVER — EDWARD LEE HARRISON

EDITORIAL

Hot-Weather Fog

ALTHOUGH the summer-season with its hot weather is virtually at an end, in the Northern and Middle States, periods of such weather are likely to be with us even during the months of September and October. This extreme rise in temperature affects not only human and animal life, but everything that is perishable, including chemicals in solution. No worker suffers more from the effects of summer-heat than the photographer who toils in an ill-ventilated darkroom. He is often hard put to keep his various solutions at the required temperature of 65° F. If he allows his developing-solution to reach a temperature much above the normal, he will find that his negative will acquire an excessive degree of opacity and, instead of being clear and brilliant, it will be dense and foggy. Solutions that are kept ready for use rapidly attain the temperature of the room in which they are kept, and the darkroom is notoriously a very hot place. The water drawn from faucets of an office-building, or of the home, is usually fairly cool in hot weather; but frequently it is tepid and unfit to use, unless chilled by ice. Practical photographers are familiar with the use of ice in connection with development and fixation. However, if none is at hand, a little bromide added to the developing-solution will act as a preventive of fog. It should also be borne in mind that, as development in hot weather has a tendency to increase density, the developer should be used diluted—more so than in cold weather. In the case of newspaper-photography, or other occasions where great haste is necessary to produce prints, the developer may be of any strength desirable for successful work, for the press-photographer takes chances that the studio-photographer or amateur might not care to assume. Moreover, the exposure of plates and films should be nearly as correct as possible, inasmuch as underexposure requires prolonged development, and overexposure a corrective manipulation, each of which calls for more than ordinary immersion in solutions that are likely to become heated, and this causes either fog or frilling. It will thus be seen that the practice of photography, during hot weather or in uniformly hot climates, is attended by serious difficulties.

Buying Used Photographic Material

CORRESPONDENCE with a prominent dealer in used (second-hand) cameras with regard to delay in sending an article purchased by one of our subscribers yielded information of an interesting character. Dissatisfied with what seemed to him an unreasonable delay in executing his order, and not receiving a reply to his several letters of inquiry as to the cause of the delay, the customer appealed to us for advice in the matter. We laid the case before the dealer, who explained the conditions that govern the sale of such goods which are stated in the list issued by him, and which is sent in response to inquiries. One point, in particular, is the cause of serious misunderstanding between the dealer and the customer, viz., the conviction of the latter that his order for a certain type of equipment, which he has seen in the dealer's bargain-list, will be sent at once, it being assumed that the order is explicit and that the remittance is satisfactory.

The customer forgets, however, that many others may be wanting this same equipment and, by the time his order reaches the dealer, may have been sold. If this should be the case, the dealer—and such, we understand, is his custom—places the customer's order on file, hoping meanwhile to fill it with the next duplicate equipment that arrives in stock. This may take weeks; it may take longer, particularly if the outfit is not one of a standard type. In the mean time, the customer wonders what has happened to his remittance. He writes to the dealer once, twice, three times, and, receiving no reply—because the dealer is often too busy to see that all letters of inquiry are answered promptly—considers that he is badly treated, loses his patience and decides to invoke the law to obtain his rights. To obviate these differences, it may be well for the would-be customer to note the conditions of sale which appear on the bargain-list of the dealer he desires to patronize, and to consider how difficult it must be for a dealer to satisfy simultaneously numerous requests for a camera or lens that happens to be in great demand. The suggestion is made by some dealers that the intending purchaser indicate a second choice, in case the article he desires most should be sold and he is in immediate need of what he orders.

ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. As many prints as desired, may be entered, ***but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind—or with thin wood-veneer.* Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Rural Scenes Competition
Closed July 31, 1919

First Prize: Alexander Murray.
Second Prize: H. B. Rudolph.
Third Prize: E. Radikin Stancliff.

Honorable Mention: Lawrence Baker; Harry Beeler, Jr.; Beatrice B. Bell; Jules H. Blazej; Ralph H. Blohm; Capt. H. W. Cochran; Ethel Dismukes; Edwin Gore Dunning; George W. French; Dr. J. E. Horning; Stephen Marsh; Julius Segall; E. H. Smith; Kenneth D. Smith.

Subjects for Competition—1919

"Rural Scenes." Closes July 31.
"Shore-Scenes." Closes August 31.
"Outdoor-Genres." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.

1920

"Twilight-Pictures." Closes January 31.
"Still-Life." Closes February 28.
"Nature-Studies." Closes March 31.
"Rainy-Day Pictures." Closes April 30.
"Miscellaneous." Closes May 31.
"Speed-Pictures." Closes June 30.

Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize ($10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Non-Receipt of Photo-Era.

IT should be unnecessary to remind subscribers of PHOTO-ERA that its Publisher is doing his very best to overcome conditions brought on by the war. Nevertheless, there are some who have held us to task for the non-receipt of PHOTO-ERA. Subscribers who fail to receive their copies—*after liberal allowance for mail-congestion*—should write us and we will see to it that a duplicate copy is mailed.

HARVESTING WHEAT IN SCOTLAND — ALEXANDER MURRAY

FIRST PRIZE — RURAL SCENES

In Hot Weather

SHOULD some of the negatives that are made during the summer-months have more density and consequently print more slowly than those made in winter, or should it sometimes prove difficult to make as good prints in summer as in winter, the cause may be found in the temperature of the developer, says a writer in *Kodakery*.

Those of us who live in cold climates heat our houses in winter, and we try to keep the temperature of our living-rooms at about 70 degrees, Fahrenheit; but in summer, when we depend on the heat that comes from the sun, the temperature in our rooms often rises above 80.

The sun also warms the water we use for mixing the developer so that the temperature of the developer is higher during the hot summer than during the cold winter-months.

The length of time that films should be developed in the tank depends on the temperature of the developer. which can only be determined by testing it with an accurate thermometer. When films are developed in the tank, *not in the tray*, correctly developed negatives can be obtained, at all times of year, with the developer at any temperature between 45 and 70 degrees, by developing them for the length of time the tank instructions recommend—20 minutes if the temperature is 65 degrees, or 1 minute less than 20 for each degree over 65, or 1 minute more than 20 for each degree under 65, when one tank-powder is used.

Because prints are developed in the tray and development is stopped when the prints look right, some workers pay little attention to the temperature of the developer that is used for photographic papers, with the result that during the hot summer-months the developer is often too warm, and the quality of the prints suffers in consequence.

It might seem that shortening the time of development when the developer is warm, and increasing the time when the developer is cold, should have the same effect on a print that it has on a negative, but such is not the case. The emulsions are different, and the images differ, in that the negative-image is not a surface-image; it is imbedded in the film and can only be seen by the light that passes through it, while the image in a print must be on its surface so it can be seen by the light that is reflected from it.

In order to obtain a print that records the various tones that can be seen in the negative, it must be exposed to the printing-light for the length of time needed for the light to pass through the negative-image and affect the silver in the printing-paper, and it must then be developed, in a developer that is of the right temperature to blacken the silver on which the light has acted, *within a specified* time. Unless this is done the print will not rightly record the various tones that the negative shows.

The length of time that a print should be developed, and the temperature at which the developer should be used, are stated in the instructions that are furnished with all development papers, and although the time and the temperature can be varied *slightly*, without detriment to the print, the permissible variations, with all papers, are small.

Too warm a developer always develops prints so rapidly that they cannot rightly record the tones that are in the negative; and too warm a developer is very apt to stain the prints.

When the developer is warmer than 70 degrees it should be cooled. This can be done by placing the

XUM

LOADING HAY — H. B. RUDOLPH

SECOND PRIZE — RURAL SCENES

developing-tray in a larger tray containing ice-water. Another convenient method, which the writer often employs when the tap-water runs at about 70 degrees, is to keep a stream of water flowing through a rubber-tube into the larger tray while the developing-tray floats on the surface of this running water.

Since the top of the floating-tray has always been well above the surface of the water no difficulty has ever been encountered with either of these methods: but should it happen that water from the large tray gets in the developer while the small tray is being rocked during the development of the print, the difficulty can be overcome by placing a couple of long iron-spikes, or any narrow strips of metal, under the developing-tray so that fully half the height of the tray will be above the surface of the water.

Equally important is the temperature of the fixing-bath. This should be at about 50 to 55 degrees F. When warmer than 55 degrees it can be cooled by moving a chunk of ice around in it for a few minutes just before the bath is to be used, the ice to be removed, of course, before prints are placed in the bath. This will keep 64 ounces of bath sufficiently cool for about an hour, unless the temperature of the room is over 85 degrees. If a smaller quantity of bath is used it can be kept cool by placing the fixing-tray in a larger tray containing ice.

When ice is not obtainable it is best to make up the needed quantity of a fresh acid fixing-bath for each batch of prints immediately before, not a long time before, it is to be used. The reason for mixing it just before use is that hypo cools the water in which it is dissolving; but after it has dissolved the temperature of the bath gradually rises until it has become as warm as the air in the room. This point it is well to remember.

The influence which temperature has on development and fixing is so great that it should never be ignored. Those who do ignore it, and those who try to determine the temperature of a solution by placing a finger in it—a very unreliable method—take the risk of encountering wholly needless complications, and it is for the sake of protecting the photographer against these complications that an accurate thermometer and the stirring-rod thermometer are furnished by dealers. These thermometers are of the special designs which have proved most convenient for the photographers.

Etching Names on Bottles

Coat the surface of the glass with wax or hard paraffin softened by the addition of soft paraffin, trace out the letters with a suitable stylus, apply strong hydrofluoric acid by means of a feather. The acid is allowed to remain until it has eaten out a sufficiently deep mark. Etching done in this way produces a clear surface. If a ground-glass effect be desired, the acid must be applied in a gaseous state. To do this, mix two parts of powdered fluorspar with three of sulphuric acid in a suitable shaped lead-trough; stir quickly with a wooden rod, and warm until vapors begin to be given off; then lay the bottle over the trough in such a way that the vapors may play freely on the designed surface. When it is sufficiently etched, remove from the fumes, wash, and remove the wax. Although either of these processes will produce results which will be satisfactory enough, neither will give markings like those on the ordinary glass-measures; these are made by emery or other hard wheels.—*The Spatula.*

THE ROAD TO THE FARM — E. RADEKER STANCLIFF

THIRD PRIZE — RURAL SCENES

Temperature and Chemical Fog

It should not be forgotten that, besides the fog which is caused by diffused light in any form falling upon plates and papers, chemical fog which is caused by the action of the developer upon unexposed silver bromide has sometimes to be reckoned with. *The British Journal* goes on to say that most of us are familiar with that form of it which arises from adding an undue quantity of alkali to a pyro-developer in the vain hope of "forcing" out detail upon an underexposed plate; but we often forget the fact that a high temperature has exactly the same effect as a large dose of alkali, namely to hasten development and so to arrive quickly at the point at which the unexposed haloid salts begin to be reduced. There are several ways to meet this hot-weather trouble. A simple one is to reduce the quantity of alkali in the developer. One well-known formula calls for eight ounces of soda-carbonate to each ounce of pyro. In very warm weather this can be reduced to one-half with advantage, and a further control may be obtained by the addition of a little bromide-solution. Even with the amidol developer, there is, in the same circumstances, a tendency to produce chemical fog; but the deposit is of a yellowish color, readily recognized by anyone who has tried to develop out a much-under-exposed print, with the difference that in hot weather the stain appears rapidly. Here, again, bromide is a cure; but the real remedy, or perhaps more correctly, preventive, is to reduce the temperature of developer by the addition of a little ice; or, better still, by putting the developer in an ice-box or refrigerator. A simple contrivance to serve this purpose is a wooden pail with a lump of ice in the bottom and a stand for the bottles above, a pad of several thicknesses of wet blanket serving as a lid. When raising or lowering the temperature of solutions, it is very desirable to use a thermometer, so that a moderate temperature can be obtained. With developers containing hydroquinone, the temperature is an important factor, and a drop below 50° Fahr. seriously affects their action. A simple but practical way to partly meet hot-weather troubles is to develop either very early in the morning or late at night. This is healthy for the operator as well as for his work, as less time is spent in the darkroom during the heat of the day.

Focusing in Dark Places

In interior-photography it is not unusual to have to deal with subjects which are so dark that there is difficulty to see clearly what is on the focusing-screen. To arrange the picture one can take the glasses out of the lens and turn the iris until it is as small as it will go. Then by removing the focusing-screen and turning the camera so that the back and not the front is towards the subject, we shall see, on looking through the iris, the subject framed by the opening left open by the removal of the focusing-screen. If the camera is racked out to what will be approximately the extension when the photograph is made, the subject can be arranged in this way quite easily, when it is too dark for anything much to be seen on the ground-glass. When all is done we "take a sight" along one angle of the base-board, and then turn the camera around until the corresponding angle of the other side is in a line with the same object as before. Whatever was seen in the opening will then fall on the plate. The focusing is best done by setting up a couple of candles—one at the nearest and the other at the most distant point that is to be sharp, and then focusing on the flames. It is a good plan in such a case as this to use a stop one size smaller than appears to be necessary.

XUM

SUBJECT FOR NEXT COMPETITION

ADVANCED WORKERS

THE SONG OF A BIRD — W. E. POTTER

Advanced Competition—Domestic Pets
Closes November 30, 1919

It was very evident from the large number of prints entered in this competition one year ago that pets are to be found in nearly every home, and that Photo-Era subscribers and readers are eager to convince their friends that photography is the means *par excellence* to perpetuate the beauty, cleverness and playfulness of one's pets. It matters little whether the pet is a canary, turtle, goldfish, rabbit, parrot, cat or dog—there is no question that it fills its own niche in the hearts of the household. There are persons who belittle the affection and care bestowed on pets; but give me the man who can win a dog's devotion in preference to the man who cannot. One outstanding feature about the photography of pets is that it is based on attachment and not solely on pictorial interest. The photographic portrayal of that which is dear to the photographer usually calls forth his best artistic and technical skill. The camerist may admire handsome buildings, revel in the grandeur of lofty mountains, delight in the ever-changing moods of the sea and devote his time to the marvels of photomicrography; but when it comes to his pets—there is *heart-interest!*

At the outset, it will be well for contestants to remember that this competition does not call for *record-photographs* of domestic pets. It is a comparatively simple matter to photograph a pet, if no attention is paid to the composition or appeal of the picture. There must be an appeal and it must not be artificial. Above all, do not dress up pets in all manner of grotesque costumes, or induce them to simulate some human act like smoking a pipe, being ill in bed, etc. Such pictures do not express the purpose of this competition. Let us have our pets as we know them, free of all artificiality.

It does not follow that the domestic-pets competition must be confined to those usually kept in the house; it may also include pets kept on the farm or the estate. However, such animals must be *pets*, not merely domesticated animals. An intelligent horse may become just as great a pet as a cat or dog. Even racoons, foxes and pheasants have become great pets. In short, any animal, bird, reptile or fish that has been made a pet is eligible to have its picture sent to this competition. However, remember that such pictures must make an appeal to the beholder and not represent merely a commercial record. Particular emphasis should be placed on some little trick or habit that is out of the ordinary.

If unusual combinations of animals are unobtainable an unusual pet such as a racoon, cub-bear, fox or deer offers excellent opportunities to the intelligent camerist. The very fact that these animals are more often wild than tame, is an entreaty that few can resist. Although

the animals hold the interest of themselves, it is just as important as ever to use care with regard to composition. Try to avoid a background of clapboards, shingles, bricks, picket-fences and other vertical and horizontal lines. A clump of bushes, a flower-bed, a wheat-field or orchard may be utilized to advantage. Small animals are often photographed successfully indoors, and the ingenuity of the camerist is put to the test to avoid annoying and detracting details.

There is one important point to take into consideration. Some persons are better adapted than others to handle animals successfully. Unless the camerist can make friends with the pet to be photographed, his chances of success are reduced to the minimum. No animal will act or appear natural if it is frightened or distrustful. Sometimes, personality alone is responsible for the restiveness of pets and, whenever this is found to be the case, the camerist had better seek other subjects. I do not mean to imply that the camerist's personality is repellent, but rather that his mental or physical characteristics are such as to arouse fear or suspicion. Some of the most refined and likable people have an aversion to dogs or cats, and usually the dogs and cats reciprocate heartily. Fortunately, in most cases there is harmony, and the camerist can devote his entire attention to his willing, although somewhat unruly, subject. This competition offers many exceptional opportunities for initiative and originality.

Without doubt, the reflecting-camera is best suited to the photography of domestic pets. The invaluable advantage of being able to watch the subject up to the moment of exposure enables the photographer to obtain the best and most natural results. Of course, other types of cameras may be used successfully. I do not mean to imply that they cannot be so used; however, the fact remains that the reflecting-camera is the best adapted to the subjects under discussion. Next in utility are those cameras that are equipped with a ground-glass focusing-back. These permit the camerist to focus accurately and compose his background; but with regard to catching the psychological moment—that is out of the question; for by the time the plate-holder is inserted, the subject's position is apt to change. In using a camera of this type, the most satisfactory method is to focus and compose the background, then insert the filled plateholder, remove the slide, and with the wire-release or bulb in hand await the desired position of the subject. Roll-film cameras and other types that have no ground-glass focusing-back must be focused on a given point as accurately as possible by scale, and the subject must be placed at this point in order to register sharply at the moment of exposure. A direct viewfinder is of great assistance although, obviously, it cannot have any control over the focus. To sum up the question of cameras suited to domestic-pet photography, there is no question that the reflecting-camera is supreme. However, other cameras may be used successfully, provided the focus, exposure and composition are carefully coördinated. Perhaps, the greatest asset of all is technical and artistic ingenuity. By that I mean the ability to meet the unexpected problems that arise inevitably in this branch of photography. There are all kinds of little expedients that may be used to gain a point, and the intelligent camerist should be alive to each and every one of them. Only by quick thinking and alertness can success be achieved in this branch of photography.

It has been my experience that domestic-pet photography cannot be forced. That is, it is not always possible to say, "I will take my dog out under that tree at 3 P.M., make him pose as I choose and produce a prize-winning picture." One of the best methods is to have a camera within reach at all times, so that when a pet assumes a certain pose or proves to be unusually tractable the opportunity may be seized at once.

Let me give a case in point. A few afternoons ago I decided to photograph our dog and to obtain the best results I took her out on a lawn with a large flower-bed for a background. Coax as I would, her canine majesty refused to sit up, look at the camera or show her usual alertness. I knew that scolding would do no good. The light was failing rapidly so that I had to do something quickly to arouse the dog to her customary liveliness. I hurried into the house, found a rubber-ball, and soon had her running after it. In the mean time, I held the camera in my hand with lens, shutter and focus set to cover the ground for about ten feet in any direction. At length the dog became so engrossed in her play that she forgot her fear or suspicion of the black object in my hand, and soon I was able to obtain several characteristic and pleasing pictures. Needless to say, I did not hold the camera waist-high, but knelt with it so that the lens was about two feet from the ground. Moreover, I threw the ball in such a manner that the dog was obliged to reach my feet by passing a flower-bed and thus I managed to eliminate an iron-fence that would have disfigured the background. In short, in this little incident I followed the course of least resistance and by so doing achieved satisfactory results. Had I continued to force the issue with the dog, I might have obtained a picture after a time—but what a mockery it would have been of our alert and lively pet!

In many homes a dog and a cat live together in perfect harmony. I know of one case where the dog takes as much care of the cat's kitten as the old cat herself. Moreover, the kitten frolics as freely with the dog as with the mother-cat. It is no uncommon sight to see the dog, cat and kitten curled up and sleeping together peacefully. Every hour of the day, this trio affords picture-material of unusual interest. Were it possible to devote the necessary time, many pictures of a high order could be made from such a combination of pets.

Obviously, such an opportunity might be utilized by a woman member of a household who is at home and able to watch the pets during the day. The groups of pets that make the strongest appeal are those that are formed naturally and without coercion. Hence, the only method is to watch carefully for the right opportunity.

It is a fact that many amateur photographers have made considerable money at odd times by photographing their own or their neighbors' pets and selling the prints to magazines, calendar-manufacturers and book-publishers. A case in point is the remarkable success achieved by the Cadbys—although they are not amateurs—with their delightful little books for children which are illustrated with pictures of kittens, puppies, chicks, birds and other animal-life. Their latest success is "Puppies and Kittens," illustrated with thirty-nine photographs by Will Cadby, and every picture is worth careful study by the camerist. Copies may be obtained from PHOTO-ERA.

In view of the fact that the editors and many on the jury have owned or own pets at present, it should be evident that the camerist who enters this competition will receive a critical yet sympathetic consideration of his picture. We appreciate the difficulties that must be surmounted and the infinite patience that is often required to obtain a result that is apparently very simple. Hence, let there be a ready response, and all who enter the Domestic-Pets Competition of 1919 will receive a cordial welcome, because there is a common bond between us all that only lovers of animal- and bird-life can understand.

A. H. B.

XUM

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, $2.50.
Second Prize: Value, $1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Certificates of award, printed on parchment-paper signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Subject for each contest is ***"Miscellaneous";*** but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than ***two*** years' practical camera-activity, and whose work submitted here, is ***without any practical help from friend or professional expert.*** A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from 2¼ x 3¾ to and including 3¼ x 5½ inches, and enlargements up to and including 8 x 10 inches.

4. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be tastefully mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print for what contest it is intended.***

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board—not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express.

Awards—Beginners' Competition
Closed July 31, 1919

First Prize: Harry Footner.
Second Prize: F. H. Rodgers.
Honorable Mention: F. Heintz; B. J. Lillibridge; Jos. S. Sylvester, Jr.

Include Photo-Supplies in the Vacation-Kit

THE close of the vacation-season has left many things of interest and value to be used for the future benefit of beginners. In deciding on the particular point to be brought out this month, I came to the conclusion that many a bitter photographic disappointment during the season of 1919 was due to the failure of the beginner to supply himself with films, plates and other accessories and to include these in his vacation-kit. Perhaps, I can make my point clearer by giving an actual case that came to my attention within the last few weeks.

A lady who was very much interested in botany and who was likewise an excellent amateur photographer of wild-flowers, prepared for her annual vacation. Among the cottagers on the shore of the lake where she had spent several seasons, was a young man who kept a fairly good stock of photo-supplies with the laudable purpose to help pay his way through college. The lady remembered this young man, when the matter of films and paper to be included in her list of vacation-necessities came up for decision, and she purchased but one roll of film and a dozen sheets of printing-out paper. Incidentally, this year she had bought a new camera with which she hoped to improve her results. Owing to the prevalence, during August, of a certain wild-flower that she wished to study, she planned her vacation solely with the intention to photograph this particular flower at its best. I believe that the specimen in question bloomed and disappeared within a period of ten days. The lake was situated several miles from the railroad and but one delivery of mail each day.

On the day preceding her departure, the lady chanced to enter the photo-supply store where she usually bought her supplies. The clerk behind the counter knew her well and courteously expressed the hope that she would have a pleasant trip. He also asked if, by any chance, she had forgotten anything, and if she was very sure that she could obtain all the supplies she needed at the lake. She replied that she was quite sure that she could. Once more the clerk suggested politely that possibly such supplies might be old or affected by the dampness in the woods. No; the lady knew from previous experience that she would have no trouble, whatever. The clerk could do no more, and he bade her *bon voyage.*

When the lady arrived at the lake she was glad to learn that several beautiful specimens of the flower she wished to photograph were already in bud and that in a day or two each flower would be in full bloom. The second day she filled her new camera with her *one* roll of film and spent a delightful morning making pictures of the lake and the adjacent hills. On her way back to the cottage for luncheon, she stopped at the young man's cottage to purchase another roll of film. To her

FIRST PRIZE
BEGINNERS' COMPETITION

BEATRICE — HARRY FOOTNER

consternation he informed her that her camera required a new size of film for which he had no demand, hence he did not carry it in stock! However, he would order some films at once to be sent special delivery. To make the tale short, the factory was temporarily behind on this particular size of film and, when shipment was made—special delivery—the local post-office was so short-handed, that it could not spare a man to make a special trip to the lake with the package of film. In short, the beautiful flowers budded, bloomed and faded—all before one film of the correct size could reach the sorely disappointed lady. This unfortunate incident spoiled what would have been a delightful vacation. To be sure, the lady made many pictures; but she had failed to obtain her greatest wish.

At the outset, let me make it clear that I do not advocate ignoring the local dealer, wherever he may be situated. He has every right to as much transient trade as he can get; and often he depends upon it for his entire year's livelihood. Undoubtedly, in many cases he renders a distinct service to amateur photographers, and his efforts should be encouraged. However, he is not and should not be expected to carry a large stock of films, plates and papers, and for this very reason the beginner should take no risks. Certain standard sizes are to be found at the four corners of the earth—the 2¼ x 3¼ roll-film is a case in point—but other sizes, common though they may be in and near large cities, are virtually unheard of in small towns and summer resorts. With all due good will toward the small-town dealer, the beginner should carry a reasonably large supply of films and plates *with him* to avoid delay and disappointment.

After all, it is only fair to one's own dealer to purchase vacation photo-supplies of him instead of from some out-of-town stranger. In many cases, it is the dealer or his assistant who has spent much time and effort to show the beginner how to manipulate his camera, and for this the dealer makes no charge. A lawyer would never think of giving the amount of advice free of charge that the average photo-dealer gives during a busy day, with never a thought of recompense. There is a fine human trait known as loyalty, and beginners will do well to display it toward any dealer who has made an honest effort to be of service. Moreover, many drug-stores carry photo-supplies and it is often convenient to purchase a film in them; but the clerks make no pretense to know anything about photography and they cannot rival the photo-dealer in practical, helpful service.

Although the vacation-season may be over for many of us, there are other parts of the world where beginners are about to seek rest and photographic pleasures away from their homes, and I feel that my point will apply to them as truly as to those who live in Greater Boston. As much thought should be given to the photographic outfit and supplies as to the amount and kind of wearing-apparel to be taken. The entire matter is one of convenience, satisfaction and justice.

A. H. B.

XUM

THE MILITARY HOSPITAL — F. H. RODGERS

SECOND PRIZE — BEGINNERS' COMPETITION

Wide-Angle Lenses

THERE still appears to be a good deal of ignorance upon the subject of wide-angle lenses, says *The British Journal*, and many photographers appear to be at a loss when it comes to choosing a lens or lenses for exceptional subjects. Briefly, a wide-angle lens is one which covers a plate the longest side of which is greater than the focal length of the lens to be used. Thus a six-inch lens may be considered as embracing a wide angle upon a 3¼ x 5½ plate, this being 55°, allowing ⅛-inch rebate. Usually, however, much wider angles are embraced; many rapid anastigmats give an angle of 80°, while some of the types of wide-angle symmetrical will give 100°. When the extreme angle of a lens is given in a catalog, it should be ascertained whether this is calculated for the base of the plate or the diagonal, as otherwise a lens embracing a less angle than is necessary may be selected. For example, if we wish to use a 6½ x 8½ plate we may have to choose between two lenses of equal focal length—one stated to have an angle of 90° and the other 78° only. Yet, if both be used upon a rectangular plate, exactly the same amount of view is included, the former angle being only obtainable in a circular picture, which is seldom required. We have sometimes found it useful to use a plate a size larger than the lens is supposed to cover and to cut from the circular image as much as can be utilized. Thus, with a four-inch rapid rectilinear a panoramic view 3 x 8 inches can be obtained upon a 6½ x 8½ plate; and by blocking out the sky so as to cover the dark corners, a greater width could be used.

Panchromatic Plates and Speed

SOME professional photographers appear to have a decided reluctance to use panchromatic plates. Perhaps, says *The British Journal*, one reason for this is the idea that the exposures are unduly long for portrait-work. This is really not the case, and if in exceptional circumstances the exposure would be unduly long, with a K2 filter— which is perhaps the most generally useful—the screen may be omitted altogether and a result produced that will be far in advance of the ordinary non-ortho plate. In fact, a panchromatic plate, if used without a screen, is equal to one of the special rapid variety, and will produce a result equal to the orthochromatic plate with a four- or five-times screen. In practical work this is a great advantage when only partial color-correction is required and the speed of the plate has not to be sacrificed. Panchromatic plates should always be used, either with or without a screen, when working outdoors late in the day, when the light is inclined to be yellow or red, and it will show a marked increase in sensitiveness over the non-ortho grades.

The Real and the Imitation

THE following comment, editorially, in *The British Journal* is timely and not without its point as applied to conditions in the United States. In nearly every branch of commerce we find imitations masquerading under names as closely approximating the genuine thing as the law will allow. We have rolled gold, which is the thinnest possible film of genuine metal which can be made by mechanical means; "walnut-finish" furniture, which is white wood stained brown, and others too numerous to mention. In photography we find the same idea not carried so far; but sufficient to mislead those who are not acquainted with the technique of photography, especially with regard to printing-processes. The word "platino" is very loosely employed; for instance, we see "platino-panels" or "platino-sketches" which have no more platinum in them than there is in a piece of newspaper. In the same way we have "carbon" papers of various kinds, which are as far removed from genuine carbon-prints as it is possible to be. Gilt-frames are innocent of gold, the color being obtained by lacquering white metal; but this is not known to the public, which would often prefer "English gold" if the difference were clearly pointed out. With prints the same result would be obtained in many cases, that is to say, people would be glad to have real platinum and carbons for the sake of assured permanency. There are many other instances which could be given, but we will content ourselves with mentioning one only—the practice of calling colored photographs oil-paintings or water-colors. This is not, perhaps, so extensively practiced as it was some years ago; but it is to be discouraged, and the use of the term "finished in oil or water-color" should in every case be used.

THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY

Exposing with a Match

In making lantern-slides by contact I always do my printing by means of a match, says E. H. W. Page in *The Amateur Photographer*. It may seem dreadfully unscientific, but "one match-power" conveys a quite definite meaning to me, and for printing on rapid lantern-plates, it forms my standard light, the distance being varied to suit different negatives. The match is struck in front of the printing-frame, allowed to burn at the distance required, and blown out just before there is a risk of it burning the fingers. The same rough-and-ready method can be employed quite successfully in exposing bromide papers.

A Coin on a Black Background

If a coin is placed on as dark and non-reflecting a background as possible, we may photograph both sides of it on one plate, according to *The Amateur Photographer*. The background must be large enough to occupy the whole of the plate, and the coin so placed that its image falls entirely on one side of the central line. After making the exposure the coin is turned over, everything else being left quite undisturbed, and is arranged on the background so that it is now the other side of the center. A second exposure can then be given, and the negative, on development, will show, apparently, two specimens of the coin side by side, one showing the obverse and the other the reverse. The background being very black, two exposures to it do not make any appreciable difference. Black velvet, or card painted with a dead black varnish, makes a suitable background. The method is obviously applicable to other objects besides coins, which it is desirable to show in more than one aspect, and three or even four exposures may be given with success [provided that all the exposures are of the same duration.—Editor].

Photographing Luminous Clock-Dials

Considerable interest has been shown in the photographing of luminous watch- or clock-dials. Many timepieces equipped with luminous dials are now in use and for this reason a report of an experiment conducted by the Eastman Research Laboratory may be of interest to photographers.

To quote from the *Abstract Bulletin*, "Luminous clock-dials were photographed by placing the dial in the front frame of an ordinary copying-camera. A circular opening fitting the dial closely was cut in the center of a piece of heavy pasteboard, the dial fastened in and the board placed in the kit regularly used to hold the negative when making lantern-slides. A 7-inch lens was used in the central compartment of the camera and the exposure was made on a Seed 30 plate. As the light from the dial is too weak to make the image readily visible on the focusing-screen, a glass-plate with lines on which to focus was first placed in the kit, the image focused, the glass-plate removed and the board holding the dial inserted.

"In mounting the dial in the board, care must be taken that the face of the dial shall come in the same plane as the plate for focusing. After inserting the dial a black cloth was placed over the front of the camera to exclude all light from without. The holder that contains the plate was placed in position, the slide drawn and a black cloth placed over the back of the camera. These precautions are advisable as the exposure required with a fast plate and open lens was seventy-two hours. The plate was developed in strong contrast developer and prints made direct, no intensification or retouching being necessary.

When Light-Tones Predominate

A valuable hint with regard to exposure is given in a recent issue of *Kodakery*. When making pictures in bright sunshine of extremely distant landscapes, boats that are two hundred feet or further away on broad expanses of water or on sandy beaches, with no trees or shrubbery or other dark-colored objects in the foreground, give only half the exposure that is needed for ordinary landscapes in which there are prominent foreground-objects. A 1/25 second exposure with stop U. S. 32 (F/22) is ample. With fixed-focus, single-lens cameras make a snapshot with the next smaller stop than the one for ordinary work.

Scum-Marks on Prints

Scum-marks on bromide- and gaslight-prints are not usually visible, or at least they are not very perceptible, while the prints are wet, says *The Amateur Photographer* in an editorial, but on drying they are very unsightly. They stretch irregularly over the prints and often appear in the form of finger-marks, although the photographer may be quite sure that his fingers never touched the surface of the prints before they were well beneath the liquid in the fixing-bath. Sometimes, they appear as a powdery deposit, suggesting that the washing was carried out very perfunctorily, although the photographer is quite sure that this was done thoroughly. A remedy will be found in a bath of weak acid. This should not be applied until the washing is complete, when the prints can be placed for a minute or two in a mixture of half an ounce of hydrochloric acid to a pint of water. They should then be washed further in a few changes of water before being dried. There is no need to apply the acid-bath until the prints are dry and show the marks; it acts quite as effectively on the dry print as on the wet one.

To Reproduce Blue-Prints

According to the *Abstract Bulletin* issued by the Eastman Research Laboratory, a number of methods were tried to reproduce blue-prints on developing-out paper. Such a print can be reproduced either by printing through an appropriate filter such as the G filter on to a hard-working paper or by toning the print to change its color and then printing direct on to a contrasty paper. The most satisfactory results were obtained by printing with the G filter on to Insurance Bromide paper; for which, if the longer exposure does not matter, Azo Hard X may be substituted. The print may be toned either with tannin or by conversion of the image into iron sulphide which on treatment with silver nitrate then gives silver sulphide.

XUM

OUR CONTRIBUTING CRITICS

YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a six-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

THE picture of the brook with the fallen tree shows me several things that are objectionable. One is that the fallen tree is unhappily placed and obviously mars the view more than anything else. It should be eliminated from the negative by skilful etching and retouching, which, however, calls for a degree of skill such as few amateurs possess. Another objection is the scattered interest. The eye wanders about vainly trying to find a resting-place. A much better picture than the present one can be cut from the extreme left, a little to the right of the big tree, then about half an inch from the bottom. With the fallen tree removed and the smaller one of the two near the path, lightened up a bit, and the path itself obscured, the entire scene could be made attractive. The general tone is good and the reflections and the general definition soft and pleasing. The scene presented by the camerist is a good example of a truism in pictorial photography, viz., what may be pleasing to the eye, as an effect, may not always yield a well-composed and permanently satisfying composition.

H. N. NICHOLS.

THE two trees inclined away from each other, together with their reflection in the water, form a sort of cart-wheel that leads the eye out of, rather than into, the picture. Perhaps, a viewpoint farther away and to the left would help—if a place could be found where the slanting line of the larger tree did not reach out of the picture, and the smaller slanting tree partly hidden behind the upright tree. This, too, would keep the stream from "coming at you" quite so straight, and remove the center of interest farther from the center of the picture.

A larger opening with a correspondingly shorter exposure would keep the background from being so white, and keep the wind from blurring little patches of leaves—giving, instead, softer details throughout the greater portion of the picture. The reflections are very nicely portrayed.

GILMAN LANE.

THE PICTURE CRITICIZED THIS MONTH

THE picture submitted for criticism lacks unity, the space being divided several times, each without a connection with the other. The first division is the perpendicular line formed by the largest tree and the river-bank. The other is the diagonal of the tree and the river-bank. There is no beauty in the latter line and it bars any attempt to enter into the picture. To the left, the means provided for ingress is, unfortunately, overbalanced by the remaining material. Should the scene be close at hand, I would suggest that it be rephotographed, so as to exclude the diagonal tree or arrange it so that it will not cut across the plate. Also, should the path be included, it be subdued so as not to compete in interest with the river which should serve as a medium for connecting the principal point of interest with the remainder of the material.

C. H. METZNER.

I HAVE no doubt that the scene portrayed by Mr. Smith was beautiful to look at, and I also do not doubt that it was the leaning tree that decided him to make the exposure. A little thought on his part would have shown him that a tree in such a position would make an unstable line that would ruin almost any composition. Without the tree, this would be pleasing; the exposure and development have given good values and the atmosphere is good. After the tree, the main fault in composition is the three exits to picture; viz., along path at left, creek in middle, and opening into distance at right. There is hardly enough shadow in evidence to carry out the title. I might suggest that a strip on left margin, 1⅜ in. wide, with 1½ in. removed from top and a little from bottom is well worth enlarging.

JOHN DOVE.

THIS is a charming bit of landscape-work containing in my humble opinion at least three pictures, and by trimming away 2¾″ from right-hand side and ¼″ from the bottom we have picture number one. Picture number two can be seen in the pretty bit on left-hand side in the path through the trees contained in a space of 1¼″ which can be made into a nice enlargement. Picture number three will be found in the portion of print consisting of large tree on left-hand side of print and by trimming 1″ from right-hand side. The whole of the print is entirely spoiled by the tree falling out of the picture and by the small tree trying its best to hold up large tree on the left-hand side. The print is no doubt better than the reproduction. There is material here for a better landscape, but not in its present form.

GARNET E. JACQUES.

ALTHOUGH the relative tones are good the scene seems unnaturally bright, according to my recollections of shady nooks and brooks. This and the hazy distance make me suspect underexposure. A darker key would automatically soften the highlights in the water too. The greatest fault however, is generosity. This is really three pictures. Left edge to 1⅜″ Might Be Any Path; ⅞″ to 1 15/16″ would, according to maxim, be Little Trees Cast Big Shadows; and 1 15/16″ to right end The Fallen Sentry. To retain it all as one picture, trim 1 7/16″ from right and 9/16″ from bottom. Then remove the two trunks leaning to the right. This last—without any trimming—would remove the wheel-spoke effect caused by trees and reflections.

HERBERT B. BERNSTEIN.

THE fallen tree diagonally across the picture-plane introduces a discordant note in harmony of line. The picture has two exits, which is bad in pictorial composition—one is the winding path at the left, and the other is the "water-route" exit in the center of the picture. The barbed-wire fence and the bank to the right of the picture exert a third "pull" on the eye. "Sunlight and Shadow," the picture is called; but judging from the print, too little shadow exists to claim mention in the title. To get the best out of the picture—on the picture, 1⅜ inches from the left-hand edge, draw a vertical line. Save the picture-portion to the left of the line, and you have the most artistic portion of the print.

CHARLES A. CARY.

XUM

OUR ILLUSTRATIONS

WILFRED A. FRENCH

THE eyes of persons of many shades of opinion will rest, at least for a moment, on the front-cover illustration and the frontispiece of this issue. The emotion most likely to be evoked will be patriotic pride in our noble and glorious institutions—institutions for which the American patriots under the leadership of the courageous, loyal and incorruptible George Washington fought and died, and which institutions, including our personal independence and liberties, are in danger of being sacrificed. For the sake, also, of the many precious lives that have been sacrificed on land and sea during the present war, we, of the true red-blooded American type, should do our utmost to save for ourselves and our descendants the heritage of Washington and Franklin. As Congressman Martin B. Madden has so eloquently declared, "We went abroad to save American institutions, to save for every American his right to live an American life in an American way."

In contemplating the superb views of Independence Hall, Philadelphia, let us all be animated by the spirit of lofty Americanism of Philip B. Wallace, as he performed the self-appointed task of picturing this truly American shrine. The technically perfect records of the historic edifice that grace the pages of our current issue, merit unstinted admiration of all lovers of pure photography. Information regarding the making of each picture is contained in the descriptive article by Mr. Wallace, a professional expert and photo-finisher of high reputation. The late fall is a good time in which to visit Philadelphia, as the summer-months are rather quiet.

To students who are eager to acquire a practical knowledge of pictorial composition, a thorough examination of the numerous examples of Mr. William S. Davis' work, which appear in PHOTO-ERA with pleasing frequency, will be found educative and gratifying in a high degree. The three studies in the current issue are noteworthy in this respect. Data: "By the Waterside"—Made by the side of a drain-ditch in the fields; early October; 4 P.M.; bright sunshine on the grasses; Ilex Anastigmat of 6-inch focus; stop, F/6.3; 1/5 second; no filter was used because the longer exposure needed would have increased the danger of the grasses moving; 3¼ x 4¼ Roebuck Double-Coated Ortho-plate; weak pyro.

"Drifting Ice"—February; bright sunshine; about 1.40 A.M.; Ingento A ray-filter; ½ second; Ilex Anastigmat; stop, F/16; Roebuck D. C. Ortho-plate; pyro of medium strength.

"Light and Shade"—Study of a Cactus Dahlia of mixed pink and yellow tints, in a yellow vase. Arranged in studio against a background of brown paper, the light coming from north and east windows, the subject being very near the latter; 5.25 P.M.; early autumn; old 10-inch Ross lens; stop, F/16; 3 minutes' exposure; Ingento A ray-filter; 4 x 5 Cramer Inst. Iso backed; dilute developer in tray.

The charmingly composed view near Sasso—probably the Sasso near Aquila in Central Italy—is one of a prodigious number of views made by G. R. Ballance, the English professional photographer, who spent over fifteen years picturing the principal beauty-spots of Switzerland, Tyrol, Italy and the French Riviera. To beginners in picture-making, particularly, this delightful scene will prove worthy of study. The effect of sunlight and shadow, here exemplified, is a refutation of the mistaken idea that strong contrasts suggest intense sunlight. The scale of gradations here is very short, and in the original print there is not a spot that is white paper. Light in a picture is produced by the addition of shade, and although the highest lights may be considerably tinted or low in tone, they are made to seem brilliant by dark opposition. Although the large tree in the center acts as a balance for its fellow at the extreme left, it is lighter in tone and, therefore, properly subordinate. This is a principle in pictorial composition that is well to be remembered. Data: May, 4 P.M.; bright light; Goerz lens, series III; 8¼-inch focus; F/8; two seconds; Ilford Slow Iso plate; pyro soda; 5 x 7 C. C. platinotype print.

Letters received here from Western correspondents bear the cancelation-stamp, "Take Your Vacation in the National Forests." This is good advice and should stimulate amateur and professional photographers to view the scenic spectacles in regions that are developed and protected by the U. S. Government. As a possible inducement, PHOTO-ERA is publishing occasional pictures of the people's national garden-spots. In this issue, on page 189, appears a remarkably inspiring sight, typical of the Mt. Rainier National Park section. Unfortunately, no data are obtainable; but reference to Mr. Cohen's article on mountain-photography, in August PHOTO-ERA, will yield a hint as to working-methods with regard to photography in high altitudes, such as is shown in the wonderful picture by Curtis and Miller.

PHOTO-ERA has published in the past a number of good articles on pinhole-photography, but none so explicit and illuminating as the one by Edward L. Harrison in this issue. The technical excellence and variety of effects that are possible with the no-lens camera is truly astonishing. Indeed, so well executed are the results which Mr. Harrison has achieved by this manifestly primitive method, that he has exhibited some of his prints and obtained prizes, the judges deeming them as good as, if not superior to, photographs produced with high-class lens-cameras. I am sure that, having perused carefully Mr. Harrison's admirable essay, readers will not rest content until they have tried pinhole-photography. Data:

"Residence Sketch"; page 193; May, noon; hazy; 3A Graflex; 5-inch sterling silver-pinhole; stop, 1/75-inch = F/375; 35 seconds; Eastman N. C. film; tank-powder in tray; Azo medium.

"City-Giants"; page 194; June, 4 P.M.; sunlight; 3A Graflex; 4-inch sterling silver-pinhole; stop, 1/75-inch = F/300; 30 seconds; N. C. film; Eastman powders in tray; Azo Glossy. Note extensive angle and rectilinear lines.

"From My Office-Window"; page 194; June, 3 P.M.; sunlight; 3A roll-film camera; 4-inch sterling silver-pinhole; stop, 1/75-inch = F/300; 25 seconds; same film, developer and paper. Note definition and depth of field.

"Moonrise on the Mississippi"; page 197; June, half hour before sunset; foggy; 3A roll-film camera; 4-inch sterling silver-pinhole; stop, 1/50-inch = F/200; 180 seconds; same film, developer and paper.

"The Veiled Moon"; page 197; June, one hour

before sunset; foggy; wooden box; 3¼ x 5½ plate; 60-inch sterling silver-pinhole; stop, 1/25-inch; twenty-five minutes; same film, developer and paper. This is a 15 x telephoto-version of "Moonrise on the Mississippi" made half an hour previously.

"Up-River"; page 198; June, 9 A.M.; hazy; 3A roll-film camera; 3½-inch sterling silver-pinhole; stop, 1/75-inch=F/260; 20 seconds; same film, developer and paper. Note wide angle obtained.

Advanced Workers' Competition

THE print accorded the first prize in the present competition was a little difficult to reproduce, largely on account of the low tone, characteristic of the late afternoon when the sun is low in the horizon. The scene is typical of Scotland, the former home of the artist, Mr. Murray, who is artistic to his finger-tips. The composition is masterly and worthy of an artist of the brush—indeed, of a MacWhirter, whom I recall as an eminent Scottish painter of pastoral scenes. Data: August in Scotland; 4 x 5 Premo camera; B. & L. Special; 6½-inch focus; used at F/8; 1/25 second; low sun; Amidol developer; part of negative enlarged on Brome Black, buff matte; redeveloped; published for the first time.

"Making Hay While the Sun Shines" has been pictured in a highly artistic manner by H. B. Rudolph, an artist with whose admirable work PHOTO-ERA readers are familiar. Page 202. A clouded sky harmonizes admirably with the principal subject, of which the eminently practical method of enticing the hay to be loaded augments the educational value of the picture. Data: July, 3 P.M.; bright light; 5 x 7 Century Camera; Euryplan Anastigmat; 7-inch focus; stop, F/6.3; 1/25 second; Eastman's Com. Ortho Film; Elon-Hydro in tray; enlarged part of negative on P. M. C. No. 2; clouds printed from separate negative.

Manifestly rural, with a gracefully entering and departing road, is Mr. Stancliff's imaginative interpretation of the theme. Page 203. Human or animal life is not needed in this already satisfying composition, which is simple, dignified, restful. Data: July, 1918; bright, diffused light; 4 x 5 (No. 4) Screen-Focus Kodak; R. R. lens; 7-inch focus; stop, U. S. 8; Eastman N. C. Film; 1/5 second; Standard A Bromide print.

The illustration of the subject, "Domestic Pets," page 204, was published last year as a prize-winner. Mr. Potter's picture has the appearance of spontaneity, and the little models simply obey one of their natural instincts; that is all. Data: July, between 12 and 1 P.M.; bright sun outside; 3¼ x 4¼ Korona; 6¼-inch Turner-Reich Anastigmat; stop, F/6.8; 1/10 second; Polychrome plate; pyro-acetone; P. M. C. Bromide print; hydro-edinol; picture made indoors near west window, with reflector on shadow side.

Beginners' Competition

"BEATRICE," page 207, the picture that won the first prize, reveals promising talent, and Mr. Footner appears to have grasped the significance of a picture in its true sense. The effort belongs to the category of genre-pictures, for it expresses a human interest—that of quiet curiosity, perhaps. As a portrait, it would seem to lack expression, also a more suitable pose so that the eyes could be seen. The attitude of the model, the lighting, the suggested out-of-doors, as well as the general technical treatment—all merit high praise. Data: No. 6 Eastman Zeiss Portrait-Lens; at F/6; 5 x 7 Seed plate 30; 1 second; pyro tray-development; Artura Iris print; Eastman M. Q.

In "The Military Hospital," page 208, Mr. Rodgers evinces an appreciation of artistic line and proportion. The stream, not yet freed of its icy covering, forms a pleasing feature in this typical winter-scene in far-off Winnipeg. Data: March; dull and cloudy; 3 P.M. Eastman Premo; Speed Film-Pack; Kodak Zeiss Tessar Ic.; F/4.5; 8-time color-screen; 32 seconds; tank-dev.; contact-print on Carbon Velox.

Our Contributing Critics

THE picture offered this month to our contributing critics for consideration is, "When the Heart is Young" by Ethel Dismukes. The following data will be of interest:

April, 5 P.M.; cloudless; 5 x 7 view-camera; 9½-inch Bausch & Lomb lens; stop, F/16; 1/5 second; Stanley plate; tank Azo F. Hard.

Lens, Lense and Lenses

IN a recent issue of *The Amateur Photographer* our good friend The Walrus makes a few pointed comments on the use and spelling of the word "lens." He says, We may grin at the expressions "a leather lady's handbag," or a "London-made gentleman's suit," but we know perfectly well what is meant, and anyone who is skilful enough to use our language in such a way as to leave no doubt about the actual meaning is not a person to be sniggered at. There is one thing, though, for which I refuse to make any allowance, and that is the silly wrong-headedness of some photographic advertisers in not understanding that the noun "lens" is in the singular number, and that the plural is made by adding "es," so that we get lenses. They persist in using lense for the singular, or else talk about a pair of lense, or yawp that they have several lens for sale and that one lense is a specially good one.

A Portrait-Lens of New Design

IN speaking of the direction in which progress in photographic lens-construction may be anticipated in the very near future, an English cotemporary mentions the design of the telephoto-lens of fixed separation. Such lenses possess a great advantage over long-focus lenses of the ordinary type, in requiring so much less camera-extension; whereas in all the details of their use the two are identical. The reduction of camera-extension not merely allows the use of a camera which cannot be opened out far enough for a lens of the same focus but not of the telephoto-type, but it is valuable, even if the camera can be extended. Long extension inevitably brings with it a loss of rigidity, and often involves a loss of stability also. Many a photographer has found that, after he has been at a good deal of trouble to arrange and focus the picture as he requires it, in taking his hands off the camera it has shifted, possibly it has fallen, because he has racked out a heavy lens too far. If he has allowed for this, the weight of the plateholder may have caused a similar result. The best-made camera, if of a very portable form, is sure to be much less rigid when opened out to the full extent of a double or triple extension; and the lens at the front, we must remember, is at the small end of the lever. A very slight movement there may be a big movement at the focusing-screen or plate. Hence we believe that the long-focus narrow angle lenses of the future will probably almost all be more or less of telephoto-type, which involves a separation between lens and focal plane of not more than about half the focal length of the lens.

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ON THE GROUND-GLASS

WILFRED A. FRENCH

The Ordeal of Being Photographed

MARSHAL FOCH submitting himself to photographers in London said to a reporter who stood by, consenting as Saul at the stoning of Stephen: "For me the terrors of peace are worse than those of war. I hate all this posing." To him exposure to the camera is more dreadful than standing before tank or machine gun.

The Marshal's dread of photographic publicity is shared by some humbler persons in these days when women, old and young, apparently court newspaper notoriety and, on a broad and usually disfiguring grin, show their teeth as if they were in a dentist's chair; when men in all walks of life strike anxiously what they fondly think is an impressive or ingratiating attitude. To some the photographic ordeal, undergone for family reasons, is still terrible.

We well remember the early photographers in our little village, when in the years of the Civil War the photograph was taking the place of the daguerreotype and the silhouette. The "studio" smelt rankly of chemicals. It was exposed to the sun and piping-hot. Little Willy's head was screwed into iron clamps that reminded him in later days of that lethal machine, the garote. The executioner covered his camera and his own head with a sort of rug or blanket, having taken out portentously his watch. A doting parent stood by, praying that the man would do darling Willy full justice. There were several attempts, while Willy grew fretful and rebellious. The machine in which his head was inserted tortured him; so did the fussily elaborate collar with the tassels which his mother had forced on him that he might be beautiful. Some days afterwards the proofs were brought home. There was a family-council. Not one of the negatives was successful. Willy's hair had been mussed; he looked frightened, or cross,—"that is not his natural expression," and so on, and so on. There was another visit to the torture-chamber.

Some men have never recovered from this early shock. Though the operation of photography is now almost painless, they shun even the amiable amateur who wishes to "snap you" on a veranda or a rock, in a boat or at the desk, in flannels or in pajamas. If they attend a performance of "Tosca," the sight of the hero tottering from Scarpia's little private chamber with blood stains on his brow reminds them of that early visit with the hideous results.—PHILIP HALE.

Boston Herald.

Marshal Foch is likely to incur the disfavor of the photographic craft by his reluctance to pose before the camera. He should rather try to follow the example of our illustrious President, who, when in Paris, favored posterity by having with him, ready for instant and constant service, the leading portrait-photographer of the Capital—George W. Harris. Thus, the Department at Washington is provided with a vast collection of pictures of President Wilson, portraying him in his various activities and functions—at the Peace-Council, at military reviews, delivering addresses, chatting with eminent persons, walking with Mrs. Wilson, at the theater, at banquets, playing golf, marching in processions, at his desk, entering his carriage, entering a palace, and so on. What a wonderful and illuminating book could be made (and is likely to be made) of these numerous special photographs that must run well into the thousands!

Spurious Bird's-Eye Views

How many times have you photographers, when attracted by a conspicuous advertisement of some manufacturer, noticed an impressive group of buildings arranged to convey the idea of a gigantic manufacturing-plant! But when you discovered that the striking picture was not a reproduction of a photograph, but of a drawing by an architectural draughtsman, you began to question the integrity of the illustration. I remember that, many years ago, when I was passing through a manufacturing-town in the Middle West, I noticed from the train the huge sign of the manufacturer of a certain well-known commodity that surmounted the roof of a large building. I took pains to make a careful survey of this manufactory—the train was moving slowly—for I remembered to have seen a newspaper advertisement of a set of buildings covering about five times the area of this one building—the actual factory. To be certain on this point, I inquired later and learned that the company's entire plant consisted of but one building and that was the one I saw from the train. After that, I have been very skeptical about the truthfulness of the bird's-eye view of a factory composed of many buildings so placed as to form an imposing architectural display, and to create a deep impression on the minds of a gullible public.

Not long ago, I noticed in a daily paper a full-page advertisement in the center of which was a well-executed bird's-eye view of the seemingly extensive plant of a well-known manufacturing firm. Like nearly all illustrations of this character, the picture was drawn by hand and the numerous buildings, towers and annexes were combined into an imposing, symmetrical ensemble. Piqued by curiosity, I wrote to the publicity-manager of the company. He very courteously informed me that the illustration represented his firm's various factories assembled in one group. In another case, a factory was represented by a row of blocks apparently one mile in length, when in reality the factory consisted of but one small block!

There seems to be no limit to the imaginative faculty when exercised in an illegitimate way. The only question that is likely to arise in the mind of the inquisitive photographer might be, what if original and unaltered photographs were used in place of these imaginary and exaggerated bird's-eye views? The answer is—they are not wanted. Like the under-exposed and unretouched portrait-photograph, they do not flatter the original. Even though it is possible to produce accurate bird's-eye views of an extensive manufacturing-plant from airplanes, captive balloons or temporarily elevated positions, such a photograph would be rejected as a tell-tale by the publicity-manager. But where the arrangement of the factory-buildings requires no touch of the imagination to convey an accurate impression, a halftone from an original and well-executed photograph might be preferable.

PHOTOGRAPHIC THRIFT

Whoever sends us a letter that we consider of practical photo-saving value, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

Practical Saving-Methods

EDITOR OF THRIFT-COLUMN: An evening-paper, of Boston, Massachusetts, practiced the following method to advertise itself. Several unoccupied building-lots situated in the Back Bay Fens, were swarming with a motley collection of human beings—men, women, boys and girls, mostly of the poorer class, eagerly searching among the rubbish-heaps, not many months ago. They were eagerly looking under stones and in barrels, examining old shoes, discarded articles of clothing, kitchen-utensils, tin-cans and among patches of grass. Deeply interested in this bewildering, chaotic activity, I asked one of the boys what he was looking for, and, without looking up, he excitedly snapped, "A dollar bill!" In a little while, a youngster gave a yell and held up a crisp one-dollar bill, which he had extracted from the interior of a piece of battered stove-pipe—the result of an advertisement in an evening-paper, the day before, to the effect that somewhere in those building-lots, were secreted five one-dollar bills and that they would belong to the lucky finders. They had all been discovered before 12 M. the next day. However, as I chanced to pass by again during the afternoon, I noticed a group of girls eagerly examining empty envelopes of which there were many scattered about among the rubbish.

It seems that the objects examined were empty envelopes; but instead of the anticipated greenbacks, one lad had found a cheque for $65 that the recipient of the letter had neglected to remove. Of course, the finder could not use it; but when he returned it to the payee (a well-known Boston business-house) he obtained a suitable reward. Other cheques, varying in amounts from $2 to $35, were found by others, in a similar way; but as they were over a year old, payment on them doubtless had been stopped, and the finders were but meagerly repaid for their efforts. Other searchers, however, were more fortunate, for they found uncanceled postage-stamps that the senders had carelessly placed between the envelopes and the letter or order, and the recipient or his clerk had thrown the envelope away without thinking to examine it. In this way, many searchers were rewarded by finding postage-stamps of varying denominations (ten-cent stamps being quite common), and amounting to several dollars.

Now I know that this information is not exactly photographic; but the incident described might serve as a warning to readers of this department who are employed and whose duty is to open the letters. Perhaps, a reader may be an employer, and he will appreciate the suggestion to see that every envelope, before being thrown into the waste-basket, be held up before a strong light, or inspected carefully, to be sure that it is absolutely empty. If this practice should prove of advantage to readers of this department, then this communication will have served a practical purpose, viz., to prevent unnecessary waste.

ALICE M. GOODSPEED.

EDITOR OF THRIFT DEPARTMENT: Perhaps, among the readers of PHOTO-ERA MAGAZINE, there are some who possess an enlarging-camera which was, at one time, manufactured by the Eastman Kodak Company and known as an Enlarging-Camera No. 1. Although equipped with a bellows and adjustable for focusing, this camera is practically a fixed-focus camera, and the lens furnished with it does not permit one to make enlargements greater than twice the original dimensions of the negative. Vest-pocket negatives thus enlarge to postcard size and 2¼ x 3¼ negatives to 5 x 7. In many cases these enlargements are too small, and they limit the usefulness of the camera.

I have discovered a method to obtain a lens for use of this type of camera, which enables one to use vest-pocket negatives and enlarge from them to size 6½ x 8½—which is the limit of the camera—with admirable results. An old rapid rectilinear lens, removed from a 3¼ x 4¼ Folding Hawkeye Camera, was attached to a home-made lens-board and fitted into the camera. Over the barrel of the rectilinear lens I slipped one of those supplementary copying-lenses, such as one can buy at any photo-supply house for 50c., and the thing was done.

A vest-pocket camera is now as useful as a large view-camera, and in making negatives of architectural subjects, I no longer try a "close-up" when using a kodak. Photograph it small and enlarge it to the desired size; one need not worry then, about the lines being parallel.

O. BICKERDIKE.

A Helpful Hint

JUST a line about a "stunt" we believe to be new and which may be of value to your readers. Use ground-glass substitute with a spotting-brush to cover a wide scratch on the film-side. When this is allowed to dry, a pencil or ink may be used on it nicely.

LUCY AND RAY MATHEWSON.

Insufficient Washing

THERE are times when a camerist may be obliged to neglect the washing of an important negative and subsequently he may wish to rewash it in order to ensure its permanency. The question arises as to whether the washing may be resumed after the negative is dried. Sometimes, insufficient washing accompanies insufficient fixing and for this reason it is always best to place the plate or film in a fresh hypo-solution of ordinary strength. This fixing should continue for at least half an hour so as to give the gelatine ample time to be softened and permeated by the solution; then wash thoroughly.

Destructive Criticism

MISS BEATRICE AMPLE, of extremely wide mouth, shows her latest, lifelike photograph to a visitor, her social rival: "What do you think of my latest portrait?"

Visitor (frankly), "From left to right—Miss Beatrice Ample."

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ANSWERS TO QUERIES

F. W. H.—**There are some F/4.5 lenses which are convertible;** however, this does not mean that they retain this speed; take the Goerz Dogmar Lens as an example; this lens works at a maximum aperture of F/4.5. When one of the combinations is removed, it becomes necessary to stop down to about F/32 to obtain definition equal to the definition obtained with the complete lens. From this, you may see that the speed of a lens is greatly reduced, and that it is not suitable for speed-photography, when the single combinations are used. However, for landscape-photography, the lens does admirable work.

R. W. Y.—**The expressions "quarter plate" and "half plate" refer to the size of plates, paper and mounts.** These terms are virtually obsolete in the United States, but they are still used extensively in England and the English Colonies. They are based on the assumption that a whole plate is $6\frac{1}{2}$ x $8\frac{1}{2}$ inches; half this plate is considered to be $4\frac{1}{2}$ x $6\frac{1}{2}$ or $4\frac{1}{4}$ x $6\frac{1}{2}$ in the United States, but in England the half plate is understood to be $4\frac{3}{4}$ x $6\frac{1}{2}$ inches; a quarter of the whole plate is $3\frac{1}{4}$ x $4\frac{1}{4}$ inches and is a standard size throughout the world. It is well for the reader of English photographic literature to keep "quarter plate" and "half plate" clearly in mind to avoid confusion when corresponding with English firms. The whole plate used to be still further divided into sixth and even ninth plate, but these terms have been suspended by the more accurate modern method of designating the size by actual dimensions.

P. T. H.—**The brilliancy of blue-prints may be improved by the following method,** though the shadows have always a tendency to block up. Expose a trifle longer than usual, and before putting in water, immerse and leave for about five minutes in a bath of strong ammonia one part to one hundred parts of water. Wash thoroughly—then develop the weak gray print in a solution of citric acid five parts to one hundred parts water. The prints change from gray to green, then to blue. Wash well.

C. P.—**Brush development of gaslight prints is not difficult.** The print to be developed is first thoroughly wet in water, then placed on a sheet of glass supported at an angle in a developing-tray and the surface water blotted off. The usual developer is diluted with about one-fourth its bulk of glycerine and applied with a rather wide rubber-set brush. It is possible to produce very pretty sketchy effects by this method. A smaller brush dipped in stronger developer may be used to bring out detail, or dipped in glycerine to hold back certain parts.

V. B. E.—**It is possible to stain negatives for the improvement of printing quality.** If a plate is flat and lacking in detail it may be strengthened by immersion in a solution of gray-blue aniline. The color is absorbed in proportion to the amount of silver reduced, and the printing detail is greatly improved.

J. H. R.—**Sodium sulphantimoniate is the chemical designation of Schlippe's salt.** It is composed of rather large reddish-yellow tetrahedral crystals that are soluble in water. It is used as a redeveloping-agent for sulphide-toning and for intensifying negatives after mercurial bleaching. It is regularly listed in *Merck's* chemical catalog.

C. H. W.—**Long bellows are required to copy objects natural size or nearly so.** Often very satisfactory copies are made by using so-called portrait-attachments and copying-lenses in connection with the lens supplied with the camera. Technically, the best results are obtained by using a plate-camera equipped with a double- or triple-extension bellows and ground-glass for focusing.

P. C. O.—**On a fishing-trip, films are preferable to the use of plates,** unless accurate scientific photography is to be attempted. The almost exclusive use of films throughout the war-zone is proof enough that satisfactory results are obtained. In your case, weight is an important item; and likewise the danger of breakage must be considered. A small vest-pocket roll-film camera equipped with an anastigmat lens should meet your requirements efficiently. The best negatives may be enlarged to 5 x 7 or even 8 x 10.

J. G.—**To photograph mahogany furniture** so that the grain will show, employ a panchromatic plate and an orange-red filter, such as the Wratten & Wainwright Tricolor A. This will record the greatest possible contrast between the lighter and darker portions of the wood, and so make the most of the beauty of the grain. For very dark old mahogany or rosewood it may be necessary to employ a deep-red filter, such as the Wratten & Wainwright F. This should be avoided if possible, however, because the manner in which it overcorrects all lighter tones tends to give a general impression of untruth.

H. W. J.—**The Fraunhofer Lines,** in spectrum analysis, are the transverse dark lines observed when viewing the solar spectrum in a spectroscope.

D. A. P.—**To develop a panchromatic plate,** which is sensitive to all colors, that light must be used by which one can see the most with the least possible illumination, which is a green safelight. Such a safelight usually consists of a sheet of glass coated with a bright yellow gelatine film, and another sheet coated with a bright green film, bound face to face, with a thick sheet of green paper between. Obviously these colors must be accurately adjusted in the spectroscope and by trial with the plates. Every manufacturer of panchromatic plates either sells a suitable safelight or recommends one, and the camerist will do well to adopt it. In general, it is advisable to follow the advice of the manufacturer. Obviously, he wishes every user of his product to obtain the best possible results.

W. C. R.—**The rôle of potassium metabisulphite in the developer** is purely that of a preservative. As such it is conceded to be more satisfactory than the usual oxalic acid in a pyro-formula. For 30-minute development at a temperature of 65 degrees the following is excellent:

A.	Water	16 ounces
	Potassium metabisulphite	70 grains
	Pyro	1 ounce
B.	Water	16 ounces
	Sodium sulphite, anhydrous	3 ounces
C.	Water	16 ounces
	Sodium carbonate, anhydrous	1 ounce

For use, take $\frac{3}{4}$ ounce of each stock solution and make up to 48 ounces with water.

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

The Twenty-first Annual Convention of the Photographers' Association of New England

THE Twenty-first Annual Convention of the Photographers' Association of New England took place, according to announcement, September 8, 9, 10 and 11, in the Auditorium, Springfield, Mass.

Unsettled conditions, with which every one is familiar, were the contributing cause of the relatively small attendance, although the total number, including the dealers with their assistants, was about 350—a fairly good showing, in the circumstances. The Executive Board had announced a program along thoroughly practical lines and it kept its word. For reasons of economy, there were no elaborate dealers' exhibits; but instead, popular experts and demonstrators were on hand to impart valuable suggestions in the use of materials and also in the management of the business. One studio-proprietor informed the writer that a certain demonstrator, who has visited nearly every important studio in New York and Connecticut, had explained to him fully how he could save several hundred dollars a year in paper alone, and he considered the four-day visit to Springfield a "capital investment." Another photographer asked me to publish a eulogy of a dryplate expert who convinced him how he could double his receipts by making certain changes in his studio-force. Still another was eloquently grateful for advice regarding the storage of negatives and filling duplicate orders, when it was made plain to him and many others who were privileged to listen to an expert's talk during the dealers' session, that after two or three years negatives had better be disposed of, as then they ceased to be an asset. It was more than ever apparent that the demonstrator who makes his periodical visits to the professional studio has become a walking photographic dictionary and, with his storehouse of the latest practical knowledge, is as welcome as the family-physician in the case of illness.

Owing to the generosity of several master-photographers, the portrait-exhibit was impressively fine and instructive. These collections of Frank Scott Clark, Dudley Hoyt and Pirie MacDonald were analyzed and commended from the platform by Ryland W. Phillips, himself an able critic and portrait-photographer of national reputation.

The Association was again fortunate to hold its convention in so spacious, well-lighted and magnificent a building as the Auditorium. Its famous organ was played by Springfield's foremost musician, Mr. Arthur H. Turner, on the evening of the first day, for the benefit of members of the convention and their friends. Through the generosity of the Springfield Chamber of Commerce, a handsome official badge was provided for each member. It consisted of a gilt bar from which, suspended by means of a red, white and blue ribbon, was a large gilt medal, bearing in relief a reproduction of the Municipal Group.

President Manahan conducted the meetings with dignity and force, and a constant eagerness for the success of the convention, that made a deep impression and gained him the approval and support of every one.

The Convention proper was opened Tuesday morning by President Manahan. The first practical talk was delivered by Orrin Champlain, of Boston, illustrating without a model his method of posing his sitters, mostly young college girls. He emphasized good, clean, everyday work; speed in making sittings, speed in getting out work and speed in pleasing customers. The applause bestowed upon his one-hour talk showed that he had succeeded in satisfying his audience.

Mr. W. M. Hollinger, the veteran portrait-photographer of New York City, spoke briefly on his personal experiences and showed that, despite his advanced age, he was just as active, interested and enthusiastic as when first he entered the profession—many years ago.

Mr. J. K. Harriman, of the A. M. Collins Mfg. Co., then addressed the convention, delivering a eulogy on the late Joseph A. Dawes of the Wollensak Optical Co. With deep feeling the speaker referred to the exemplary traits of character, personal enthusiasm and beneficent influence of his late friend, whose ideals were high above sordid business and mechanical activity—"not what we gain, but what we give." With high principles constantly in mind, and put into practice, Mr. Dawes was able to repay, with profitable results, the confidence placed in him by his firm, and, at the same time, to win the lasting friendship and respect of the entire photographic trade. At the conclusion of this beautiful tribute, Mr. Harriman received long and hearty applause.

From 2 to 3 P.M., William C. Noetzel, of Newton Center, Mass., demonstrated his use of delicate fabrics, embroidered chiffon, tulle, Liberty scarfs, Georgette crêpe, etc., in draping the shoulders and bust. He produced a series of strikingly beautiful portrait-effects against the light (a 750-watt nitrogen-lamp with reflector at the side), his model being Mrs. Russ, of Springfield, a young and attractive brunette. About a dozen 8 x 10 exposures on Eastman Portrait Film were made by Mr. Charles Nelson, of the Eastman Kodak Company, assisted by Mr. H. A. Collings. The results were displayed in the hall on the following day and elicited considerable interest.

At 3 P.M. J. C. Abel, secretary of the P. A. of A., explained "how to figure the tax-return to Uncle Sam," also how to deal with the financial side of the photographic business. He had a carefully-prepared list of figures to support his statements.

The rest of the afternoon—as, indeed, every available moment during the convention—was spent with the dealers, who took pains to interest and entertain the members, as well as to book orders.

In the evening, a large audience listened to an eloquent address by Major-General Clarence E. Edwards, his subject being the experiences of the 26th Division in the World-War. He also made a strong appeal in behalf of the American Legion. General Edwards then introduced Captain Edwin H. Cooper, who was head of the United States Signal Corps Photographic Unit, and distinguished by his daring, and utter contempt for his personal safety, in making photographs at the firing-line. He was cited three times for valor and received the French Croix de Guerre, the Distinguished Service Cross, and the

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Distinguished Service Medal. He was injured several times, and the only wonder is that he was not literally blown to atoms, for he gave the enemy several hundred chances. After introducing Sergeant E. R. Trabold—who has a portrait-studio at North Adams, Mass.—his assistant at the battle-front, Captain Cooper gave a recital of his many interesting war-adventures illustrated with screen-pictures.

Many motion-pictures and still pictures were shown of battle-scenes, exploding shells, infantry-charges and many thrilling close-ups that indicated the extremely perilous position of the camera-man (Captain Cooper). He also showed pictures of the decoration of the colors of the 104th Infantry by the French government, of the entrance into Château-Thierry and of the distinguished American ace, Eddie Rickenbacker, in his airplane. Captain Cooper is the only passenger that Captain Rickenbacker ever carried during his career as an aviator. Among his numerous daring exploits was his visit to Germany, disguised as a civilian, where he made many valuable still photographs, including General Hindenburg's deserted headquarters, which were also projected on the screen. In the Captain's official government-service memorandum is a clause stating that "Captain Cooper was with the foremost ranks on every front and in every advance, all his duty being voluntary and without assignment."

Wednesday, 10.30 A.M., began with a demonstration under the light, and with a professional model, by L. J. Buckley, of Binghamton, N. Y. This well-known artist made a hit with the audience by settling the portraitist's bugbear—white shirtwaists. He advocated the sitter's retirement into the dressing-room and the removal of the objectionable garment. This operation was illustrated by his model—a young woman of shapely proportions—and Mr. Buckley proceeded to replace the missing raiment with crêpe de chine of various hues, also with diaphanous fabrics, producing simple, artistic and harmonious effects that elicited expressions of approval from an appreciative audience. Mr. Buckley also disapproved the broad, white collar which the dear ladies are so fond of wearing over a dark dress. This he removes—of course with the sitter's approval—and replaces with suitable fabrics, artistically arranged, producing invariably pleasing and harmonious effects. Mr. Buckley also explained how the character of the background influenced the expression of the sitter. He even goes so far as to change the highlight in a worked-in background in such a way that even in one and the same negative he can obtain a different expression. The idea seemed to be an entirely new one to many of his listeners. It is certainly well worth investigation and study. Mr. Buckley's discourse proved to be one of the most valuable features of the convention.

Mr. Ryland W. Phillips, past-president of the P. A. of A., followed at 11.45.

The morning-session was concluded with a valuable talk by past-president J. Chester Bushong, of Worcester, in which he explained an original system of recording orders. This was followed by the announcement of the different prizes and the presentation of an exquisite pearl scarf-pin to President Manahan by Mr. Paul True (of the Ansco Co.) on behalf of the Association. The afternoon was devoted to outdoor-sports and amusements at Riverside Park.

Thursday, at 10.45 A.M., Spencer B. Hord, of the Eastman Kodak Company, gave an informal talk on his interesting topic, "Who is Your Competitor?" Frederick Elton, of the Federal Board of Vocational Education, had been announced to speak on the possibilities open to ex-service men and the ways they can be helped by the department; but in his stead, Ryland W. Phillips addressed the convention in his usual happy vein. S. S. Loeb, of the Presto Mfg. Co., then spoke volubly on his theme, "Dark-room Short-Cuts." After the usual routine, which included reports of committees, election of officers and place of meeting, the convention adjourned to 1920.

W. A. F.

Manufacturers and Dealers

THE manufacturers and dealers who had space at the convention, together with their assistants, were as follows:

The Ansco Company—W. B. Mussen, general salesmanager, Frank N. Leache, Paul E. True, Frank Hearn.

W. J. R. Burns, colored backgrounds—W. J. R. Burns ("Bobby Burns").

California Card Mfg. Company—Wm. A. Leonard.

Central Dry-Plate Co.—C. D. Farrar.

Chilcotte & Sargent—W. A. Hatch.

A. M. Collins Mfg. Co.—H. H. Collins, Jr., J. K. Harriman, Joseph Kinn.

Cramer Dry-Plate Co.—J. C. Brown.

Eastman Kodak Company—C. F. Ames, Arthur H. Paul, Spencer B. Hord, Harry M. Fell, Joe Di Nunzio, Fred Becker, A. B. Cornish, Walter Pierce, A. C. Fisher, Chas. H. Leake, Chas. Nelson, H. T. Rydell, J. C. Whitney, W. F. Spurling, R. J. Nesmith, Harry Wills, Fred Commander, H. F. Arnold, H. A. Collings.

Fowler & Slater—P. R. Slater, L. A. Miller.

Gross Photo-Supply Co.—H. M. Weissfield.

Haloid Company—F. W. Godfrey.

Hammer Dry-Plate Co.—Clint Shafer.

Ralph Harris & Co.—Herbert F. White.

Kimball & Mathews—E. O. Wagner.

Medick-Barrows Co.—F. C. Medick, R. H. Barrows.

Morris & Bendien—S. Moseson.

George Murphy, Inc.—J. G. Lavender, G. W. Harse.

Photo-Appliances Corporation—James E. Reedy.

Presto Mfg. Co.—S. S. Loeb.

Sprague-Hathaway Studios—Philip P. Smith, Fred B. Elwell.

Robey-French Company—Thomas Roberts, Jr., general manager, W. M. Snell, F. Q. Avery, George A. McLaughlin, Wm. G. Homeyer, Carl J. Marion.

Special Materials Co.—H. E. Kuhn.

Taprell Loomis & Co.—W. L. Harris, M. E. Sholl.

Wollensak Optical Co.—M. C. Williamson, S. L. Gates.

The Photographic Press

THE Photographic Press of America was represented by J. C. Abel, of *Abel's Weekly* and the *Amateur Photographer's Weekly;* Frank V. Chambers, of the *Bulletin of Photography,* and *The Camera;* John A. Tennant, of *The Photo-Miniature,* and Wilfred A. French of *Photo-Era, The American Journal of Photography,* assisted by Mrs. M. Russ, of Springfield, Mass.

The Abel Trophy Cup

THE handsome silver cup, offered by *Abel's Photo-Weekly,* for the best two portraits, not less than 5 x 7 inches, made entirely by an employee of a portrait-studio in New England, was awarded to E. Brewster, of the Schervee Studio, Worcester, Mass. Special Commendation was accorded to Henry E. Gates, of the Powers Studio, Claremont, N. H.

The Grand Prize

WITH its usual breadth of spirit, the New England Association offered its solid gold medal grand prize—a handsome, solid gold medal—to all professional photographers in the United States and Canada, the only conditions being three portraits of not less than eight inches in height, and membership in the P. A. of N. E. The medal, this year bearing in relief the effigy of President W. H. Manahan, Jr., was awarded to the A. K. Peterson Studio, of Hartford, Conn.

Competitors for the Grand Prize

Fred W. Carter, Covina, Cal.	3
J. T. Collyer, Springfield	3
J. Chester Bushong, Worcester	3
John Sabine, Providence	3
Frank Batelli, New Haven	3
A. Allyn Bishop, Newport, Vt.	3
W. C. Noetzel, Newton Center	20
W. H. Manahan, Jr., Hillsboro, N. H.	1
Trabold Studio, North Adams	3
C. H. Batchelder, Lynn	3
G. H. Nazarain, Woonsocket	3
Jared Gardner, Rockland, Mass.	3
L. L. Higgason, Asheville, N. C.	5
D. J. Bordeaux, Springfield, Mass.	3
L. J. Buckley, Binghamton, N. Y.	8
The Rand Studio, Brockton	3
Donnelly Studio, New Haven	3
Geo. E. Tingley, Mystic, Conn.	3
Peterson Studio, Hartford	3
Fafchamps, Hartford	3
J. B. Hostetler, Davenport, Iowa	3
Eric Stahlberg, Northampton	3

Competitors for Abel's Trophy-Cup

H. A. Farrar, Athol, Mass.	2
G. W. Perry, Concord, N. H.	2
Henry E. Gates (Powers Studio)	1
Thelma Gerrish, East Lynn	2
E. Brewster, Worcester	2
Pattie Brooks, Bridgeport	3

Complimentary Exhibits

Frank Scott Clark, Detroit	30
Dupras & Colas, Montreal	3
Dudley Hoyt, New York	29
Kimball Studio, Concord, N. H.	3
J. Chester Bushong, Worcester	4
Garden Studio, Springfield	4
The Clapp Studio, Athol	5
Frank Batelli, New Haven	3
Pirie MacDonald, New York	11
Howard D. Beach, Buffalo	3
Gay Studio, Fall River	2
Trabold Studio, North Adams	20
W. M. Hollinger, New York	4
Frank Esposito, Derby, Conn.	2
National Salon (P. A. of A.)	8
The Byrd Studio, N. Cambridge	7
George H. Russell, Lowell	9
Charles L. Lewis, Toledo	3
Titus Studio, York, Pa.	3
Gerhard Sisters, St. Louis	3
C. M. Gatschene, Oberlin, Ohio	3
T. J. Rice, Oberlin, Ohio	3
H. T. Wright, Springfield	5
Morris B. Parkinson, Boston	4
W. B. Child, Newport, R. I.	2
D. J. Bordeaux, Springfield	3
The Currier Studio, Franklin, N. H.	2
Nester Maki, Gardner, Mass.	2
The Towles Studio, Washington	3
G. Edward Powers, Milford, N. H.	2
L. J. Buckley, Binghamton	8
Fred W. Glasier, Brockton, Mass.	8
Koshiba Studio, New York	5
Phillips Studio, Philadelphia	4
Louis F. Bachrach, Boston	12
Shorey Studio, Brattleboro, N. H.	2
John H. Garo, Boston	15
George E. Tingley, Mystic, Conn.	3
Peterson Studio, Hartford	10
Fafchamps Studio, Hartford	7
Roger P. Jordon, Portland, Me.	5
Warren C. King, Portland, Me.	3
Frizell Studio, Dorchester, Mass.	6
Commercial Photo. Co., Springfield, Mass.	12
Johnstone Studio, Hartford, Conn.	4

A Prize from President Manahan

A TASTEFULLY framed print of an impressive landscape by President W. H. Manahan, Jr., was presented to Lewis Oliver, vice-president for Rhode Island, for procuring the largest number of members in the P. A. of N. E.

Officers for 1919–20

THE election of officers for the ensuing year resulted as follows:

President—W. H. Manahan, Jr., Hillsboro, N. H.
First vice-pres't—A. K. Peterson, Hartford, Conn.
Second vice-pres't—Wm. C. Noetzel, Newton Center, Mass.
Treasurer—E. A. Holton, Boston, Mass.
Secretary—Earl G. Mills, Providence, R. I.

STATE VICE-PRESIDENTS

Maine—Roger Paul Jordon, Portland.
New Hampshire—Ira F. Lindsey, Manchester.
Vermont—C. E. Shorey, Brattleboro.
Massachusetts—J. R. Neville, Brockton.
Rhode Island—Lewis Oliver, Providence.
Connecticut—W. F. Donnelly, New Haven.

Concert and Dance

AFTER the formal opening of the convention, Monday, at 8 P.M., by President W. H. Manahan, Jr., the members were treated to an organ-recital by Arthur H. Turner, the Auditorium's official organist, assisted by Mrs. Charles Nelson, of Brooklyn, N.Y., vocalist. Mr. Turner's selections served to display in an eminent degree the brilliant qualities of the municipal organ and to please the audience. Mrs. Nelson appeared twice on the program, and with four songs gave marked pleasure. Her voice is sweet, with good carrying-quality, and was well suited to her selections. Mrs. Nelson is the wife of Mr. Charles Nelson of the Eastman Kodak Co. After the concert, the seats were moved aside and a very pretty cotillon was inaugurated under the personal direction of J. K. Harriman. The favors—pretty, original and varied—were provided by the Robey-French Company and distributed by George A. McLaughlin and several assistants. The entertainment was the most successful of its kind that members can recall, and reflects great credit on the liberality and taste of the Robey-French Company, and the master of ceremonies, Mr. Harriman.

XUM

Recreation at Riverside Park

THE Auditorium was closed during the afternoon and evening, and everybody went to Riverside Park to enjoy the *al fresco* repast and outdoor-sports. These exercises included a clam-bake dispensed under the supervision of George A. McLaughlin of the Robey-French Co. The perfectly satisfied aggregation was then photographed by the Phoenix Photo-Company of Springfield. Then came field-sports, a tug-of-war and the inevitable baseball-game. The ball-game—between the White Sox (manufacturers and dealers) and the Cincinnatis (photographers) was won by the former by an overwhelming score; whereas the manufacturers won the tug-of-war from the dealers. The 104th Regiment Band furnished the music for dancing during the early part of the evening.

The Springfield Chamber of Commerce

IT is doubtful whether there is a city in the United States as intelligently enterprising as Springfield, Massachusetts. Its Municipal Group is probably the most beautiful and impressive collection of buildings in America, and its Chamber of Commerce is famous for its efforts to advertise the city as an ideal convention-center and place of residence.

The recent convention of the Photographers' Association of New England was accorded exceptional courtesies, which will linger long and pleasantly in the memories of all who were in attendance. Not only did the Chamber furnish the use of the Auditorium free of expense, together with the free use of electric light, at all times, but it tendered to the convention a free organ-recital by its own official organist. It supplied all printed matter including the handsome souvenir-program, and also the tasteful membership-badge—one to each member. All the rugs, vases, decorations and accessories used for the demonstrations on the platform were also furnished gratuitously by the Chamber of Commerce.

All of this speaks highly for the spirit of enterprise and friendly coöperation of the City of Springfield and its active Chamber of Commerce. W. A. F.

Toronto Camera Club

THE International Exhibition of Photography, Canadian National Exhibition, Toronto, August 23 to September 6, 1919, was the Twenty-eighth Annual Exhibition of the Toronto Camera Club. The work of artists from England, Australia, France, Norway, United States and Canada was hung in the exhibition. The illustrated catalog contains many well-known names among American photo-pictorialists. An innovation in the catalog was a brief description of the photographic processes represented in the exhibition, viz.: bromide, carbon, chloride, gum, oil and platinum. The secretary, Mr. A. S. Goss, is to be commended for the well-arranged and well-printed descriptive matter.

St. Louis Camera Club

ACCORDING to information received from Mr. A. W. Prasse, publicity-manager of the St. Louis Camera Club, the club is now enjoying a renewal of interest on the part of its members, many of whom were unable to do any photographic work during the war. Excellent pictorial work is now in evidence at every meeting and the week-end hikes and outings are becoming increasingly popular. The club meets the second and fourth Thursdays of every month at the Central Public Library, 13th and Olive Street, St. Louis. Resident photographers are invited to attend the meetings. The future of the club is filled with promise and its officers are making every effort to maintain its high standards.

Printing as a Sister-Art

WHEN a department-editor solicits answers to his query, "What was the darkest moment in your life?" he does not expect that an individual has more than one such horrible experience. The replies which serve to entertain the reader of the newspaper, when he turns with a sigh from Senator Hitchcock's labored efforts to explain the League of Nations, are variedly thrilling and bloodcurdling and, if read shortly before bed-time, are enough to produce a horrible nightmare.

The Editor seriously doubts, however, whether among these published "dark moments," there is one which in anguish approaches his own, when, in reading his carefully prepared effort, "True vs. Eccentric Pictorial Photography"—as it appeared in the September issue, he beheld, "Printing and pictorial photography are acknowledged to be sister-arts," instead of "Painting and pictorial photography are acknowledged to be sister-arts"—as he had originally written it.

A Fake Photographic School

LONG hair and a flowing necktie are not always the badge of an artist, although many undeserving individuals adopt these eccentricities in order to gain their object. There are charlatans in nearly every walk of life; but sooner or later they are found out and their career comes to an end. The Publisher received some time ago an illustrated booklet of a new school of photography in a western city. The view of the reception-room gave convincing evidence of poor taste in the selection of pictures that (dis)graced the walls, and of technical inefficiency of the person who made the photographs. The portrait of the proprietor and director, relieved against a superabundance of long, bushy hair, showed a countenance weak in character.

The Publisher was not agreeably impressed by this means of publicity and, before forming a decisive opinion of the institution, wrote to several trustworthy friends in —— asking for definite information regarding it. The replies were exactly what he had anticipated—unfavorable. Naturally, the Publisher refrained from mentioning the school and was prepared to refuse any request to advertise it. Indeed, the present reference to this institution has its origin in the fact that worthy persons have been induced to patronize it, although the place is ill equipped with necessary apparatus and competent instructors. There is room for a properly conducted school of photography in the West; but evidently the one alluded to in the present instance does not appear worthy of confidence or patronage.

The Latest in Professional Activity

ADVANCED amateur workers who are thinking of entering the professional field, should not neglect to read the necessarily abbreviated account of the doings of the convention of the Photographers' Association of New England, at Springfield, September 8–11. The talks and demonstrations by distinguished portrait-photographers, though recorded briefly, will surely furnish material for investigation and study.

LONDON LETTER

CARINE AND WILL CADBY

THE London Salon of Photography opens its exhibition at the Galleries of the Royal Society of Painters in Water Colors (5a, Pall Mall East) on September 13 and closes on October 11. The conditions of entry are the same as in recent years, except that there is no clause relating to the contribution to the Red Cross of a percentage of the sale of pictures, a pleasing reminder that the war is really over. No photographs are to be sent framed, but they may be mounted, and the mounts must be of certain uniform sizes. All accepted exhibits will be shown mounted and under glass.

The British Scientific Products Exhibition, at the Central Hall, Westminster, London, affords grounds for comforting reflections. One of the early effects of the war was the discovery by the public that we had been relying almost entirely on Germany for dyes, drugs, and optical glass, amongst a good many other necessaries. This exhibition shows that the position has been entirely changed, for the manufacturers of this country have found out that they can make all the products formerly obtained from Germany and Austria. But it was in the largest section, devoted to chemical products, that we were most interested, for here there were examples of the photographic sensitizers introduced by Professor Pope of Cambridge, associated with Dr. W. H. Mills. One important application of their discoveries during the war was the circumvention of camouflage color-schemes of the enemy, so that by means of photographs made from the air they were able to recognize and represent objects below, no matter what their color.

In another sphere of work, photography has been quietly making progress, as the Sixth Annual Report of the Director of the Solar Physics Observatory at Cambridge University shows. It contains interesting results on lightning discharges and on the electric field of thunderstorms that could not have been obtained, had it not have been for improvements in the methods of measurement, including the provision of an apparatus for giving a photographic trace of the electrometer-readings. Without going into the subject too deeply, it is interesting to learn that the electric force produced in the upper atmosphere above a thunderstorm, at the moment of passage of a lightning-discharge, appears to be great enough, not merely to produce ionization, but to give rise to cathode rays, positive rays and X-rays.

July 19 will forever be a memorable date in this country. It was our Peace Celebration Day, and right through the land, little villages and big towns celebrated the event, for us, on an unprecedented scale. Village-fairs were revived, with Maypole and Morris dancing; games of skill and strength were arranged; and feasts in which the entire population participated, were organized. But, of course, the great pageant of victory was carried out in London. The huge procession, comprised of contingents of all the Allies and associated forces had a long march set for it, and we believe it is a fact that the size of the crowd has never been equaled in London.

What struck our photographic minds most forcibly, when hopelessly imprisoned by millions of closely packed fellow-citizens, was the fact that, but for the timely invention of the camera, this marvelous scene could not possibly have been handed down to posterity. Probably kindlier portraits of the chief-figures, such as Marshal Foch, Sir Douglas Haig, and General Pershing might have been made by the deliberate work of painters; but this is not the point, for the historic interest of the scene must be divided equally between the war-worn, but very smart troops from all countries, and the crowd of spectators. Now photography, and no other art but photography, could chronicle this record-breaking assembly. No painting done after the event in a studio, would carry conviction to our grandchildren. It was as if the line of the procession had been literally smothered with humanity. Houses, roofs, and ground were plastered with people. How they got there, stayed there, often in what seemed impossible positions is a mystery.

Of course, the papers have been filled with snapshots of various bits of the procession and, incidentally, of big chunks of the crowd, but no other photograph quite equals one reproduced in the *Sunday Pictorial* as a faithful epitome and record of the whole event. In this picture, the photographer must have perched his camera somewhere on the top of one of the high buildings south of Charing Cross, and the view he gives is of the Admiralty Arch, on the way to the Saluting-Base. This picture, for it *is* a picture, and well composed, seems to epitomize the whole ceremony, and should certainly go down to posterity, not only as a faithful record of the historic scene, but as an example of how well photography has envisaged it.

After the peace-festivities in London, we spent a few days at the sea. There, in one of the biggest Kentish watering-places, that still bears honorable scars inflicted by enemy air-raiders, we discovered again a record-sized crowd. Rusted barbed-wire defenses had not entirely disappeared, and the dug-outs, hastily made by the soldiers when air-raids were as frequent as the weather allowed, were still to be seen in the middle of the streets. But nothing mattered now to the vast population, which for so many seasons had been deprived of its annual holiday at the sea. The children played in the disused trenches, the underground shelters made ideal hiding-places, and the heaps of rusty, rolled-up barbed wire served their original delaying-purpose, but in the games of the little ones instead of in the stern realities of grown men.

Even our old friend, the beach-photographer, had reappeared on the sands, and a chat with him, in his canvas-studio, revealed the present demands of his patrons. Our photographer, it appeared, had worked in khaki at an obscure photographic job until quite recently, and seemed as pleased to be free as the rest of the crowd. "Most of the business is done with couples," he said, "and Harriet sees to it that Harry puts on his coat, so that the wound-stripes shall show."

We examined his portraits, all made directly on the metal surface that is presented to the customer, and were struck by the interesting quality in many of the ferrotypes. The credit for this could not be placed to the photographer, for he was quite oblivious of the fact, and evidently worked in an almost automatic way at his trade. Probably it was due to the metal surface on which the picture is imprinted, and we went

(*Continued on next page*)

XUM

RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER

The following patents are reported exclusively for PHOTO-ERA MAGAZINE from the patent-law offices of Norman T. Whitaker, Whitaker Building, Washington, D. C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The patents mentioned below were issued from the United States Patent Office during the month of August, the last issues of which have been disclosed to the public.

William A. Lenz of Lebanon, Mo., has invented a Photoprint-Washer and has received patent, No. 1,313,395.

Patent, No. 1,313,564, on Aerial Camera has been issued to Frederick A. Todd of Butte, Mont.

Sigmund H. Gallmeier of Rochester, N. Y., has perfected a Camera, patent, No. 1,313,285.

Patent, No. 1,312,052, on Film for Cameras, patented by Oton Sartorius, José F. Gandara and Benito Colonna of El Paso, Tex.

Arthur L. Jones of Auburn, N. Y., has invented a new Camera, patent, No. 1,312,122.

Patent, No. 1,312,050, a Photographic Print-Washer, has been issued to Gleason W. Romer of Lake Helen, Fla.

Ernst H. Stahlhuth of Columbus, Ind., has received patent, No. 1,312,283, a Camera-Finder.

A Stereoscopic Attachment for Cameras has also been invented by Max William Beyer, Edgewater, N. J., patent, No. 1,312,675.

John A. Andrushes of Amsterdam, N. Y., has received patent, No. 1,313,872, Diaphragm-Controlling Attachment for Camera.

Patent, No. 1,314,030, Focusing-Attachment for Cameras, has been issued to Stafford P. Walsh, San Francisco, Cal.

William Wenderhold of New York, N. Y., assignor to Cru Patents Corporation, has invented a Photographic-Printing Apparatus, patent, No. 1,312,289.

A Camera for Composite Helsochromy has been patented by Fred Judge of Hastings, England, patent, No. 1,312,694.

Max William Beyer of Edgewater, N. J., has received patent, No. 1,312,674, a Camera-Attachment.

Projected Backgrounds

ABOUT six years ago, PHOTO-ERA described a novel method of producing temporary backgrounds in connection with studio-portraiture by means of the stereopticon. Lantern-slides of outdoor-effects—landscapes, wood-interiors, water-views, flower-gardens, arbors, mountain-scenery—which make suitable artistic and effective backgrounds are prepared for this purpose. These are projected from a small darkened room, situated at one end of the studio, upon a suitably tinted translucent screen, which constitutes the background of the portrait to be made. Of course, the sitter or sitters are placed before this temporary (illuminated) background and the exposures are made in the ordinary way. If, however, a sitter should desire several pictures of himself, each with a different background, possibly his own choosing, he can be accommodated. All that the photographer has to do, is to change the lantern-slide.

It seems that a patent for this novel portrait-background has been granted to Hugo Sonntag-Erfurt, Germany (D.R.P. No. 246940).

The London Letter

(*Continued from the preceding page*)

away determined to invest some day in a beach photographic (ferrotype) outfit, and deliberately work for daguerreotype-effects.

Messrs. E. S. Dutton, of the United States, are bringing out this autumn, simultaneously with its appearance on this side, a new children's book by the present writers, called "Topsy and Turvy." It will contain three holiday stories written in such simple language that children not far beyond the mysteries of their A. B. C. will be able to read them. There will be forty photographs illustrating the text. The same firm is also about to publish in the United States three other children's books which we have written, viz.: "The Dolls' Day," "Finding a Fairy," and "Puppies and Kittens." They are, as far as we know, the first experiment in applying photographic illustration to stories for children.

Owing to the reviews of these little books that have appeared in PHOTO-ERA, we have had several applications from readers of that journal for copies, and we are glad to be able to state that these books will very shortly be published in America.

The September Cover

HE introduced himself as Mr. Henry S. Watson, a new subscriber, and called to pay his respects to the Editor. The many complimentary things he said were duly appreciated. Asking and obtaining permission, Mr. Watson examined the framed masterpieces of pictorial photography that adorn the walls of our offices—Anderson (1); Garo (4); Coburn (2); Macnaughtan (2); Sümmons (1); Mrs. Cassidy (2); Horsman (1); Latimer (1); Gerhard Sisters (2); Edwards (2); Bradford (1); Mortimer (2); Perscheid (2); Wierum (2); White (1), and many others.

After having thoroughly enjoyed the artistic treat, the visitor expressed his pleasure and thanks and, bidding us farewell, he was about to leave the office when he caught sight of a handsomely framed picture resting on a chair, which had escaped his notice. Examining it with evident satisfaction, he asked what it represented. "The Mayflower leaving Plymouth, England, September 16, 1620, by F. J. Mortimer," was the reply. Mr. Watson's face assumed a serious expression and he asked, "Is this an original photograph?" "Certainly, it is." "And that sailing-vessel in the distance, the Mayflower?" "Supposed to be!" "Well!" exclaimed Mr. Watson, in an injured tone, "do you mean to say that it was possible to photograph a scene as far back as 1620—long before photography was invented? If the camera does, it may fool some people, but it can't pull that stuff on yours truly!" And, shrugging his shoulders, he departed.

Spare No Expense

"WOULD you like me to insert a half-tone photograph of yourself?" asked the interviewer.

"Certainly not," replied Mrs. Newrich. "I don't wish it to look as if the question of expense was considered in the slightest. Let it be a whole tone or nothing."—*Exchange.*

WITH THE TRADE

The New 1920 Wollensak Catalog

THE new illustrated lens- and shutter-catalog of the Wollensak Optical Company, Rochester, New York, is a booklet of real value to the amateur and professional photographer and is one of the best issued by this firm. Not only is it a price-list, but a source of accurate technical information. The glossary of lens-terms is one of the best that we have seen. The numerous illustrations are of original photographs by workers of national repute. This catalog is now ready for general distribution and may be obtained free of charge from photographic dealers or the manufacturers.

The Bausch & Lomb Optical Glass Catalog

DURING the war the attention of the photographic industry was focused on the solution of the optical glass problem in the United States. The Bausch & Lomb Optical Company's new manual and catalog of optical glass is the answer. It contains a brief historical sketch of the discovery of optical glass in Europe and then continues with a description of its development in the United States. A valuable color-absorption chart is included with the text and much other information of immediate interest. The typography of the catalog and the illustrations are of the highest excellence. Every practical photographer who wishes to know how optical glass for camera-lenses is manufactured to-day should write for this illuminating brochure.

Still Another Use for Sheet-Mucilage

A SUBSCRIBER has discovered another practical use for the sheet-mucilage made by the Tablet and Ticket Company, Chicago, and advertised in this issue. He states that in addition to the many uses to which he has put sheet-mucilage, he found it to be very effective to mend a cheque which he tore in two accidentally. He used a 2-inch strip on the face of the cheque and another on the back. The strips being thin and transparent, our subscriber was able to mend the cheque securely without covering up any of the writing or printing on the face of the cheque which was easily visible underneath.

Art-Photographs by G. R. Ballance

G. R. BALLANCE justly deserves to be ranked as the prince of photographers of Swiss and Italian scenery. During a sojourn of twelve years in the Engadine and Tyrol, also, later, among the Italian lakes, Mr. Ballance produced a series of pictures, over 15,000 different subjects of these pictorially wonderful regions, which, for sheer beauty and artistic composition, have probably never been equaled. PHOTO-ERA, during the past ten years, has published over thirty of these pictorial gems and, in the current issue, presents still another example of Mr. Ballance's compelling artistry. Permanent address at Menton, A. M., France. Mr. Ballance has prepared a series of artistic reproductions, in the form of enlarged photographs and photogravures, which he offers to the public at very modest prices. PHOTO-ERA is pleased to endorse the high quality of these prints, as well as Mr. Ballance's business-integrity.

The Illinois College of Photography

IT is a source of great satisfaction to President Bissell to note the prominent part that many of his students played in every branch of the service during the war. He feels that the college should be proud of its alumnæ. The attendance is growing, and in one of the recent classes a Cuban, Italian, Japanese and Mexican were enrolled. The thorough, practical instruction to be obtained at this college is responsible for the success of many a professional photographer.

Prints of the Mayflower

IN reply to numerous requests for pictures of the departure of the Mayflower from the port of Plymouth, England, September 16, 1620, from the wonder-camera of F. J. Mortimer, F.R.P.S., and reproduced in September PHOTO-ERA, we are preparing to supply half-tone-proofs, 10 x 12, wide margins, safely packed, for $0.75 each. Orders accompanied with remittance (money-order or postage-stamps) sent to PHOTO-ERA, will receive prompt attention.

His Unhappiest Moment

A PHOTO-DEALERS' meeting, held in a certain large Eastern city, recently, was concluded with the usual banquet. As a novelty, and in place of the customary, funny story, the toastmaster called upon different members to "tell us which was the unhappiest moment in your life." A well-known importer of European photo-specialties arose to say that the unhappiest moment in his life was when he saw his portrait in the personal column of the local *Morning Luminary* with the statement that he had been in the photographic supply business, as an imposter, for forty years! He is still lying in wait for that compositor.

At Willoughby's

"YOU wouldn't refuse to let me have six dozen plates on credit, would you?" asked the itinerant photographer.

"I trust not," said the salesman; but there was something in the way he said it that caused the I. P. to go off without the plates.

In an Iowa Photographic Studio

ENTER a middle-aged couple.

Says I (the photographer): "Do you want full figure or just head and shoulders?"

He (partly deaf): "Vot?"

She (endeavoring to explain): "De photographer vants to know if we should show de whole ting or only de breast."—*Boston Herald.*

Through a

Bausch & Lomb Tessar

ANASTIGMAT

Bausch & Lomb Tessar IIb Anastigmat Lens, F.6.3. One two-hundredth of a second at F.8. Good sunlight. This is a very small part of a 2½ x 4¼ negative, enlarged 4½ times. No retouching.

What Will the Negative Show?

There's density and definition; detail in highlights and shadows; correctness of perspective; color-value—consider all these.

For the negative *can* show only what the lens throws upon it. And any picture worth taking at all is worth taking as well as it can be taken.

In poor light—cloudy or rainy outdoors, on porches or indoors—good snapshots—better than many a time-exposure—can be made easily through Bausch & Lomb Tessar Anastigmats (I C, f. 4.5, or II B, f. 6.3). And in bright sunlight, they stop the fastest action blurlessly.

Ask your dealer to put a Tessar Anastigmat on your camera. Then you will see how pleasurable photography can be.

Bausch & Lomb Optical Co.

622 ST. PAUL STREET, ROCHESTER, N. Y.

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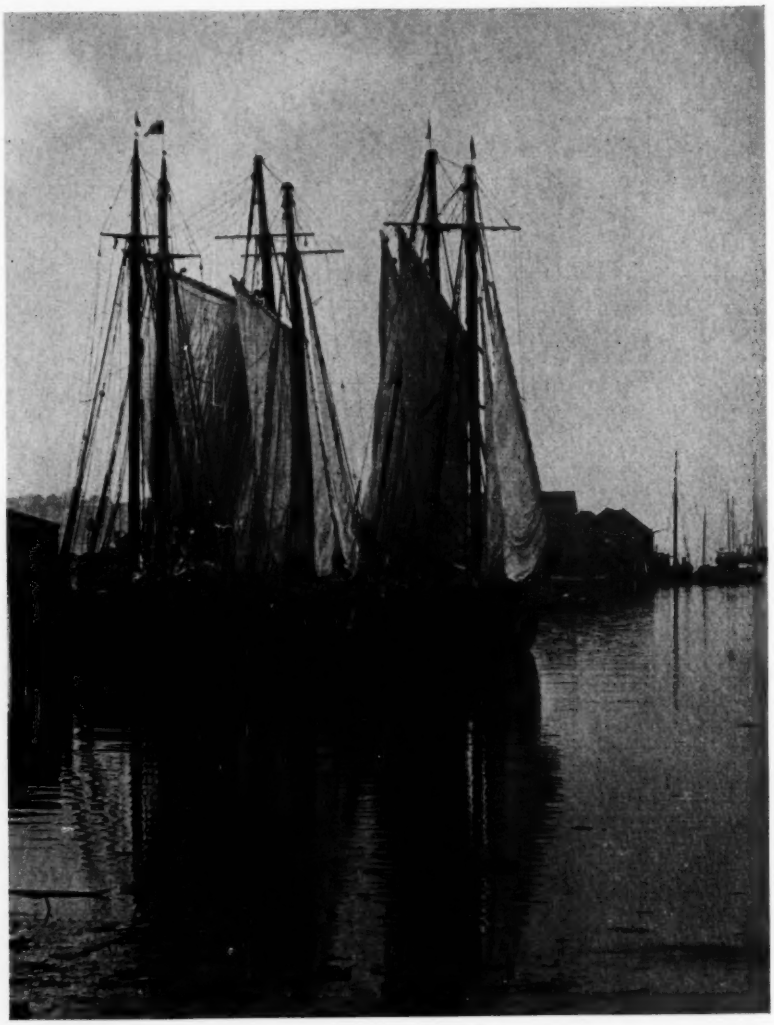

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